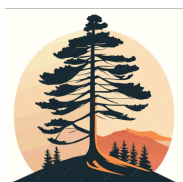


BIOSPHERE



**EVERGREEN
PLAYS**

www.EvergreenPlays.com

Biosphere

© 2025 by Steve Lyons

Version 05/19/2025

Professionals and amateurs are hereby warned that a royalty must be paid for every live, pre-recorded, virtual, or online performance, whether or not admission is charged. All inquiries regarding rights—including but not limited to amateur, professional, radio broadcast, internet, television, cable, motion picture, live streaming, public reading, and translation into a foreign language—should be addressed to

Evergreen Plays, 2800 Church Str, Bellingham, WA 98225

360.296.1753 | sales@EvergreenPlays.com

No live, pre-recorded, virtual, or online performance, broadcast, reading, or presentation of any kind may be given without permission from Evergreen Plays.

Up to six minutes of video may be made public for promotional purposes of a licensed production.

These rights are fully protected under the copyright laws of the United States of America and of all countries covered by the Universal Copyright Convention or with which the United States has reciprocal copyright relations, including Canada, Mexico, Australia, and all nations of the United Kingdom.

THE FOLLOWING INFORMATION MUST APPEAR ON ALL PAPER AND DIGITAL PROGRAMS, PRINTING, AND ADVERTISING:

1. The full title: Biosphere
2. Writing credit: By Steve Lyons
3. In addition to the above, the program must include: "Produced by special arrangement with Evergreen Plays, Bellingham, WA"

Characters:

Caitlin O'Connell:	Female, 30s
Helen Shaffer:	Female, 30s
Bonnie Morgan:	Female, 30s
Dino (pronounced Deeno) Vicente:	Male, 30s
Alan Brown:	Male, 40s
Chad Barrington:	Male, 30 – 45
Optional Actor(s):	
First Reporter, Dr. Nolan, Astrid Storm	Male or Female

Set and Prop Requirements:

Dino, Helen, Caitlin and Bonnie are inside the Biosphere. Characters outside of Biosphere are on raised platforms or some other visual representation of “outside.”

Running Time:

1 hour 45 minutes. Plus intermission.

ON RISE: Alan Brown on a platform. He is speaking at the ceremony just before the Biospherians enter the glass enclosure. Perhaps a photo of the Biosphere 2 complex is projected behind him.

September 26, 1991. 8AM.

ALAN:: It is difficult to convey the enormity of the Biosphere project.

Ten years in planning and construction. The three acres encompassed by this enormous glass structure includes 3,800 plant and animal species, the largest artificial ocean in the world, and seven different biomes including a rainforest, ocean, mangrove wetlands, savannah grasslands, desert, agricultural and human biomes.

A grand research facility, Biosphere will provide profound insights into our ecology here on earth. And equally important, act as a prototype of self-contained environments for people to live on other worlds.

And now, our four brave Biospherians will breathe their final breaths of earth's atmosphere, step through the airlock and breathe air entirely generated by the plants and trees contained within this air-tight glass dome. They will remain sealed in Biosphere for next two years.

Recreating Eden, saving the earth, and fulfilling humanity's destiny of reaching for the stars. Bonnie Morgan, Dr. Dino Vicente, Helen Shaffer, and Caitlin O'Connell, we wish you bon voyage.

SCENE 2

SETTING: Two months later, inside of Biosphere.

ON RISE: Helen and Caitlin on stage

CAITLIN is lying down on a table that holds several monitoring instruments. She really should not be doing that. She is exhausted. HELEN probably sits in a chair.

CAITLIN: I would give anything for a hamburger and an oxygen tent.

(An alarm sounds. Beep
Beep Beep. Not loud.)

HELEN: Again!

(Without looking, CAITLIN
slaps the reset button on an
instrument and the sound
stops.)

CAITLIN: How about you?

HELEN: I'd love to fuck somebody good and hard.

(CAITLIN gives a look.)

We've been in here for two months!

CAITLIN: Yeah but... more than a bacon burger?

HELEN: Oh. You didn't say it was a bacon burger.

(Alarm sounds again.)

What's the matter with the sniffer?

(CAITLIN hits Reset. Looks
at instrument)

CAITLIN: It says the oxygen is below 19%.

HELEN: That can't be right. Let me check the chromatograph.

(Checks. Sighs.)

We gotta call Dino.

CAITLIN: Yeah.

HELEN: He's gonna ask how we got the chromatograph working again.

CAITLIN: Yeah.

(On walky-talky)

Dino, it's Caitlin. Can you come to the lab?

HELEN: Those guys are being so stupid.

CAITLIN: Yeah.

HELEN: This is all messed up. We can't possibly survive another 22 months in here.

CAITLIN: If mission control would just listen to us, this would be so simple.

(DINO enters)

DINO: What's up?

CAITLIN: The sniffer alarm went off.

DINO: Did you reset it?

CAITLIN: It went off again.

DINO: You still have it set for 19% oxygen level?

CAITLIN: Yes.

HELEN: The chromatograph gave the same reading.

(DINO looks at chromatograph. Pause)

DINO: Why is our O2 this low?

CAITLIN: I don't know.

DINO: And is the CO2 going up?

CAITLIN: Our carbon dioxide is bouncing all over the place.

DINO: We went over the modeling of the gases for months. We have enough plants to keep our oxygen at 21%.

Last night Bonnie woke up gasping.

CAITLIN: Yeah. It happens to me too.

I have a print out of the CO2 and O2 levels since closure.

(CAITLIN hands documents
to DINO)

Since you did the modeling, could you just look at these and tell me what you think?

DINO: Yes.

HELEN: So. We're all going to just die in here?

DINO: Helen, you can walk out of the airlock at any time.

Right Caitlin?

CAITLIN: What?

DINO: The mother board of the chromatograph was fried. Now it's working perfectly. How?

CAITLIN: I didn't go out of the airlock.

DINO: So, you had someone bring in a new motherboard.

CAITLIN: (nothing)

DINO: What is the point of this project?

CAITLIN: To do science.

DINO: To live in an enclosed environment for two years without any help from the outside. No outside food, no outside air, no outside chromatograph mother boards.

HELEN: Dino is right. That is how it was sold to the public.

DINO: And the investors.

(pause)

I need to tell Bonnie.

CAITLIN: Tell her it may be a natural fluctuation in O2.

DINO: I'm not talking about the O2.

(DINO leaves)

HELEN: That went well.

CAITLIN: You agree with him, don't you?

HELEN: No.... I don't know.

CAITLIN: This is not an exercise in survival. This is an experiment. We learn from our mistakes, we make adjustments, and go on. We learned that we should have extra chromatograph mother boards. We note that and replace the chromatograph mother board.

HELEN: That makes sense to me. But, that's not what they said we are doing on the cover of Time Magazine.

(FADE Helen and Caitlin)

SCENE 3

Lights up Bonnie. **BONNIE:** is bent over, vomiting into a bucket **DINO** enters, realizes what is happening, rushes to Bonnie.

DINO: Bonnie!

(DINO gets a towel for Bonnie)

Here.

BONNIE: Sorry.

(BONNIE heaves again)

(DINO supports BONNIE as she vomits. BONNIE is spent.)

I...

(Heaves again.)

Tried... to get to the bathroom.

DINO: It's okay.

(BONNIE breathing heavy.
Relaxes slowly)

BONNIE: Okay. I'm okay.

DINO: Here.

(gets chair)

Sit.

(BONNIE rises from bucket)

BONNIE: God that's disgusting.

(Sits in chair. Breathes)

You aren't going to kiss me?

DINO: Ah.

BONNIE: Kidding. What did the lab want?

(DINO is probably cleaning
up BONNIE)

DINO: The O2 is below 19%.

BONNIE: Yeah. But the sniffer isn't real accurate.

DINO: The chromatograph gave the same reading.

BONNIE: The chromatograph? I thought the mother
board was fried.

DINO: Not anymore.

BONNIE: Those assholes.

DINO: Yup.

BONNIE: Who went through the airlock?

DINO: I think Caitlin had someone bring in a new mother
board.

BONNIE: The press is going to find out. They always do.

DINO: Please don't get worked up about this. You are
under enough stress.

BONNIE: Yeah.

DINO: Our oxygen is at 19%. It's triggering more and
more of your headaches. Maybe we should—

BONNIE: I'm not leaving.

DINO: At night, you can barely breathe.

BONNIE: I'm not leaving. Fix the oxygen problem.

DINO: We will leave together.

BONNIE: No.

Dino. If I leave, there goes my dissertation.

DINO: It's not worth what you are going though.

BONNIE: I spent years developing the Biosphere coral reef. By the time we get out in two years, I need to have my Ph.D. finished.

DINO: But not at the expense of your health.

BONNIE: I don't know what to do Dino. My dissertation was supposed to be this triumphant exploration of how to establish a successful coral reef.

DINO: It can still be about that.

BONNIE: The reef is a disaster. I have to shift my dissertation to focus on all the stuff I did wrong.

DINO: Disaster is more interesting than success.

BONNIE: (scoffs)

DINO: Seriously! Something has ravaged the corals. What could it be? There's intrigue! There's mystery!

BONNIE: Yeah. But by the end of the murder mystery, we gotta find out who done it. I don't know who done it.

DINO: You'll figure it out.

BONNIE: (Pause Breathing.)

Dino, will the oxygen keep going down?

DINO: Caitlin gave me the oxygen read outs since closure. I will study these and hopefully discover something.

SCENE 4

Enter HELEN

HELEN: Knock. Knock.

(DINO sees Helen, leaves)

HELEN: We have converter duty this morning.

Ugh. What's that smell?

Bonnie, you look like shit.

Hey. I think I found the source of the smell. Do you know there's a bucket here filled with puke?

God that's gross.

(HELEN begins to clean it up)

BONNIE: Here. Let me—

HELEN: No. Sit. I got this.

BONNIE: Thanks.

HELEN: You cannot afford to be throwing up food.

Looks like sweet potatoes from last night's dinner.
What's going on?

BONNIE: I'm fine.

HELEN: This bucket says otherwise.

Do you think you need to see a—

BONNIE: No.

HELEN: If you have the flu, you should be in quarantine.

BONNIE: It's not the flu.

(HELEN approaches Bonnie.
Puts the back of her hand to
Bonnie's forehead)

HELEN: Cool as a cucumber.

BONNIE: Mmm. On a salad?

HELEN: Yeah. With tomato slices and fresh mozzarella.

BONNIE: And don't those salads have fresh basil?

HELEN: I could eat a gallon of that stuff right about now.

BONNIE: You and I are making Thanksgiving Dinner.
Maybe we should make it for Thanksgiving.

HELEN: We can try.

BONNIE: Let me get cleaned up and I will join you at the
converter shortly.

HELEN: I really don't think you should expose the others
to whatever you have.

BONNIE: It's just my migraines.

HELEN: Oh. They seem pretty bad.

BONNIE: The lack of oxygen....

HELEN: I think that we're all discovering a newfound
appreciation for air.

BONNIE: You won't tell Caitlin.

HELEN: Why don't you want me to tell Caitlin?

BONNIE: (no reply)

HELEN: I don't understand this thing between you and Caitlin.

BONNIE: Just don't tell her.

HELEN: Okay.

Well, I need to help Caitlin clean the CO2 converter.

BONNIE: I will join you in a bit.

HELEN: Just take it easy this morning.

(HELEN turns to leave. SHE turns back.)

Hey. How are you set for batteries?

BONNIE: Fine. Thanks.

HELEN: Could I borrow some?

BONNIE: You didn't bring the right size?

HELEN: I brought the right size. Double A's. It's just. I have used them a lot.

BONNIE: I can't help you.

HELEN: You don't have double As?

BONNIE: I need them for our flashlights.

HELEN:

How many do you have?

BONNIE:

I really need to be very cautious. We just don't know what is going to happen.

HELEN: Okay.

(pause)

I have C size. I could trade you.

BONNIE: I don't need C size.

HELEN: Dang.

BONNIE: What do you need these batteries for?

HELEN: (No reply)

BONNIE: For the project?

HELEN: It's... personal.

BONNIE: (?)

HELEN: Look. You have Dino, right? I don't have Dino.
Okay? What I have is... well, what I have needs
double As.

BONNIE: Oh.

HELEN: I just didn't anticipate I would be so....
enthusiastic.

BONNIE: I'm really sorry.

(HELEN starts to leave)

And Helen.....

HELEN: (?)

BONNIE: (Indicates zipped mouth)

HELEN: (Mimics zipped mouth)

(HELEN leaves)

(Lights off Bonnie)

SCENE 5

Lights up CAITLIN. On the floor. Struggling to put
on galoshes. Enter HELEN

CAITLIN: Hey.

HELEN: Hey.

(HELEN plops down beside her and begins putting on galoshes.)

CAITLIN: Bonnie isn't joining us?

HELEN: She feels sick.

CAITLIN: What kind of sick?

HELEN: Upset tummy.

CAITLIN: Throwing up?

HELEN: Yes.

CAITLIN: A lot?

HELEN: Well. I'd rather not say.

CAITLIN: What?

HELEN: She asked me not to talk about it.

CAITLIN: Does she need medical attention?

HELEN: I think she'll be fine.

CAITLIN: With our limited food consumption, no one can afford to throw up anything.

HELEN: I think she'll be okay.

CAITLIN: I bet our reduced oxygen content is triggering her migraines.

HELEN: (no reply)

CAITLIN: Is it her migraines?

HELEN: God damnit Caitlin, you always do this.

CAITLIN: Always do what?

HELEN: Figure stuff out.

CAITLIN: She hasn't helped out on the farm for the past week. And she was supposed to cook dinner on Monday and she didn't.

HELEN: Well. She hasn't felt well. I promised her I wouldn't tell you about the migraines.

CAITLIN: You didn't tell me. I guessed.

I think she should leave and we should get another marine biologist.

HELEN: If she leaves, her Ph.D. thesis is toast.

CAITLIN: Well, the corals are dying. I would love to take over management of the reef.

She doesn't have the metabolism to make it in here.

HELEN: Outside the oxygen is at 21%. In here it is 19%. The low oxygen is triggering her migraines, that's all.

CAITLIN: But it's not just the low oxygen. Everything is different in here. The atmosphere, the light, the smells, the diet, the water, the physical stress. All of it could be triggering her migraines. And the longer she is in here, the worse it will get.

HELEN: I know. I've been worried about our nutrition, actually. And not just because we are all eating less. Do you think we are getting all the vitamins and such that we need?

CAITLIN: Our diet lacks vitamin D, because the glass dome filters out the Vitamin D that the sun normally provides. None of us are getting Vitamin D.

HELEN: Well. But eggs have Vitamin D. We eat lots of eggs.

CAITLIN: Where do the eggs get their Vitamin D?

HELEN: From the chickens!

CAITLIN: Where do the chickens get their Vitamin D?

HELEN: From. The sun?

CAITLIN: Yes.

HELEN: And from their food?

CAITLIN: Exactly!

HELEN: So! The chickens are getting their Vitamin D from the food! We're okay!

CAITLIN: The food we feed them.

HELEN: Exactly.

CAITLIN: From the stuff we grow in here.

HELEN: Yeah.

CAITLIN: And the stuff we grow, where does –

HELEN: From the dirt! Dirt has vitamin D.

CAITLIN: (look)

HELEN: So. What's the side effect of Vitamin D deficiency?

CAITLIN: Depression.

HELEN: Hmm. That explains some things.

CAITLIN: Yeah?

HELEN: Yeah. Ever since we got here, the chickens have seemed really sad.

(pause)

Are you ready?

CAITLIN: I guess. Cleaning the CO2 converter is so gross.

HELEN: It's better than algae duty in the Biosphere ocean.

CAITLIN: Do you know that Alan still has not told the media that we have a CO2 converter in here?

HELEN: It makes no sense.

CAITLIN: If we were on Mars, we would have a CO2 converter.

HELEN: On space flights they have CO2 converters.

CAITLIN: The media will find out eventually and accuse us of deception.

HELEN: And they will be right.

CAITLIN: Well, Dino is being interviewed on CBS. Maybe he comes clean.

HELEN: What! Dino is on CBS!! When?

CAITLIN: The interview was yesterday. It is supposed to air at noon today.

HELEN: It's nearly noon right now! Why didn't you tell me! Let's go watch. The converter will still be gross and disgusting when we get back.

CAITLIN: Okay! Let's go!

SCENE 6

BONNIE and DINO onstage. HELEN and CAITLIN enter.

HELEN: Hey, why didn't you tell everybody you are going to be on CBS!

DINO: It isn't a very good interview.

HELEN: Wow! CBS! Dino that's great!

CAITLIN: All publicity is good publicity.

HELEN: You are the most articulate of the bunch of us. I am sure you do fine.

DINO: I would prefer that we not watch it.

CAITLIN: They always edit out the bad parts.

HELEN: Did, like, Dan Rather come here to the visitor's window?

DINO: It wasn't Dan Rather.

CAITLIN: It's going to be on in one minute!

BONNIE: He doesn't want you to watch it.

(pause)

HELEN: What's going on?

(CAITLIN grabs TV remote. Clicks it.)

(Spotlight on another area of the stage. DINO goes to light, sits in chair. Picks up a phone line. **NEWSMAN:**, outside of Biosphere, in a separate light, on a

platform, picks up other line.)

NEWSMAN:: Tonight, we welcome Dr. Dino Vicente, one of four volunteers spending two years in Biosphere, a hermetically sealed three-acre environment that is closed off to the rest of the world. Located north of Tucson Arizona, Biosphere is meant to be a model for colonization of other planets.

How is it going? How are the four of you getting along?

DINO: Over the past two months, we have all grown very close.

CAITLIN: Oh brother.

DINO: We need each other in order to survive. You can imagine that intense reliance on one another makes us a close-knit family.

HELEN: That makes sense to me.

NEWSMAN: You all knew each other before being closed up together?

DINO: The people who developed Biosphere are all part of Alan Brown's Synergism community.

NEWSMAN: Synergism?

DINO: Synergism means that the whole is greater than the sum of the parts. What we can accomplish working together is greater than what we can accomplish as individuals.

NEWSMAN: Alan Brown is the executive director of Biosphere?

DINO: Correct. But Biosphere is just one of many projects of the Synergists. We built a 100-foot ferrocement sailing vessel which has circumnavigated the world multiple times, researching coral reefs and ocean ecology. I met my future wife aboard that ship. We own a ranch in New Mexico, there's a—

NEWSMAN: Excuse me, but you keep saying “we.” This sounds a bit like a cult.

DINO: Heavens no. I would never be part of a cult.

NEWSMAN: Well, what is it?

DINO: We refer to it as an “intentional community.”

NEWSMAN: I read that your group began in 1967 as a theatre company in San Francisco?

DINO: Correct.

NEWSMAN: And you lived together in a commune?

DINO: Correct, but that was before my time. They were seekers with a vision for a better life for themselves and the planet.

NEWSMAN: And all of it is centered around this Alan Brown? If it is not a cult, how would you describe it?

DINO: Alan encourages us to focus not on him, but rather focus on the world around us. We draw our inspiration from the world, not from an individual.

NEWSMAN: So, Biosphere is just one of your projects?

DINO: At this point, our projects include the research vessel, a touring theatre ensemble, a ranch in New Mexico, an art gallery in London, a sustainable forestry project in Puerto Rico, a hotel in Kathmandu, a savannah-restoration project in

Australia, a conference center and organic farm in France, and a performing arts center in Texas.

NEWSMAN: Impressive.

DINO: And Biosphere.

NEWSMAN: Ah yes, and Biosphere. All these projects sound very expensive.

DINO: We have people who believe in what we do and support us.

NEWSMAN: Have you participated in all these projects?

DINO: No. I don't have that kind of energy. The only person I know of who has worked on nearly every one of our projects is our fellow Biospherian, Helen.

NEWSMAN: So, Biosphere is self-sustaining. Nothing goes in or out?

DINO: Not even air. This is the most airtight environment ever created.

NEWSMAN: Inside of Biosphere, do you follow the news?

DINO: Oh yeah, we have several TVs in here that keep us connected to the outside world.

NEWSMAN: So, as you know there has been speculation that the inhabitants of Biosphere are not fulfilling the mission that they set out to fulfill.

DINO: How's that?

NEWSMAN: Biosphere claimed that no materials would be allowed in or out for two years and that the environment would be self-sustaining. For example, the oxygen would be wholly provided by the plants and trees.

DINO: Yes.

NEWSMAN: But it has been reported that Biosphere has a carbon dioxide converter that artificially removes carbon dioxide from the atmosphere.

CAITLIN: Here we go.

DINO: A CO₂ converter is a fairly substantial piece of equipment. If there was a CO₂ converter in our three-acre world, don't you think that I would know about it?

NEWSMAN: Well, yes, I suppose so. So, the air is fine?

DINO: The plants are working hard to keep us alive.

NEWSMAN: Dino, the whole world is watching and wishing all the best to you and the crew.

DINO: Thank you so much for your support and well wishes.

(Lights off NEWSMAN)

(DINO returns to others)

(pause)

HELEN: Technically, I suppose that, in the strictest sense of the—

CAITLIN: You lied.

BONNIE: He didn't. He said that—

CAITLIN: I know what he said.

(PHONE rings)

That would be for you.

DINO: (Answering phone) Hello? Yes Alan.

HELEN: Ah-oo.

DINO: Yes, I know but—

Yes sir.

Okay.

Yes, they are sitting right here.

I'm not sure.

Yes. Thank you very much. Congratulations to you as well.

Yes. Thank you so much.

I certainly will.

(hangs up phone)

(pause)

Alan says "hi."

CAITLIN: I cannot fucking believe this.

(To Bonnie) Did you know that Dino lied about the carbon dioxide scrubber on national television?

BONNIE: Dino said what Alan told him to say.

CAITLIN: So. Alan knew.

DINO: Did Alan know about the replacement mother board for the chromatograph?

CAITLIN: Well. No. I kinda orchestrated that one. But I certainly wouldn't lie about it on national television.

DINO: Here.

(Hands Caitlin a business card)

Here's the reporter's phone number.

Do the right thing. Call him. Tell him the truth.

(CAITLIN grabs phone.
Begins dialing.)

HELEN: You're calling the reporter?

CAITLIN: No. Alan.

(Lights up on Alan in swivel
chair, Perhaps his back is to
us.

His phone rings.)

HELEN: Stop. You don't want to do that.

ALAN: Hello.

(HELEN hangs up CAITLIN's
phone.)

HELEN: You are really worked up.

ALAN: Hello?

HELEN: You don't want to talk to Alan in the state you're
in.

(Lights down on Alan)

CAITLIN: But I do.

DINO: Talk to me instead.

CAITLIN: Fine. Whatever I say to you will get back to Alan
anyway.

On Mars, they will have a CO2 converter!

DINO: Yes. You and I know that. But in the press, they
will say that we are artificially decreasing our
carbon dioxide, and therefore we are not fulfilling
the goal of naturally balancing oxygen and carbon
dioxide.

CAITLIN: Instead, thanks to the lies told by you and your good buddy Alan, the press simply says “Biosphere is deceptive.”

Look, I have dedicated years of my life to creating Biosphere.

DINO: We all have.

CAITLIN: Right.

So, when the press is dismissive of what we are doing here, it hurts.

DINO: Yes, of course.

CAITLIN: But when you and Alan lie to the press, you give them every excuse to be dismissive.

DINO: (Nothing)

CAITLIN: I love this project. But I don’t love how we are going about it.

We should have proposed a two-month project where we enter Biosphere, learn about the ecology of this closed system and after two months, we make adjustments and reenter for a three-month period and learn and tweak and go back in and—

DINO: What you are describing would have never been funded. Would have never been covered by CBS nightly news. And would have never gotten off the ground.

CAITLIN: Then maybe that is good!

This isn’t science. This is theatre.

(pause)

HELEN: Let’s get back to converter duty.

(CAITLIN and HELEN begin to leave)

BONNIE: (*sotto voce*) Helen?

HELEN: (Turns back)

BONNIE: (Indicates zipped mouth)

HELEN: (Mimics zipped mouth)

CAITLIN: Oh, I almost forgot. Bonnie, Helen tells me your migraines are getting worse.

HELEN: What!

BONNIE: Helen!

HELEN: Bonnie, I didn't... Caitlin, I told you not to—

CAITLIN: She didn't tell me. I figured it out.

HELEN: I just told her that you were throwing up and couldn't come to converter duty.

CAITLIN: That's all she said.

BONNIE: Okay.

CAITLIN: I assume that you will be leaving?

BONNIE: I am committed to seeing this through to the end.

CAITLIN: So... what does that mean?

BONNIE: I will stay as long as I can.

HELEN: Bonnie, I admire your dedication.

CAITLIN: I admire your dedication also. But it is irresponsible to stay in here if you are endangering yourself. And it is a disservice to the rest of the Biosphere team. We need everyone giving this one hundred percent and you can't do that if you

are suffering from severe migraines. You need to leave.

(pause)

BONNIE: If I leave, the press will slaughter us. Two months in and they are already giving up.

CAITLIN: We'll get someone else in here who will take over your duties. Maybe a different marine biologist will bring a fresh perspective on the problems with the coral reef.

DINO: Bonnie is well aware that something isn't right with the corals.

CAITLIN: I have some experiments I'd like to run on the corals.

BONNIE: You?

CAITLIN: Yeah.

BONNIE: Look. Whether I stay or leave is a private decision that Dino and I will make.

CAITLIN: Well, I think that—

BONNIE: This discussion is over.

(Lights down)

SCENE 7

One month later. Lights up on BONNIE and DINO. BONNIE is putting up Christmas decorations. BONNIE is having difficulty breathing.

DINO: You shouldn't be doing that.

BONNIE: Christmas decorating makes me believe that my life is normal.

DINO: Maybe you should wait for the others.

BONNIE: Okay.

(SHE sits. SHE is not doing well)

(Enter HELEN and CAITLIN. THEY are maybe wearing Santa hats and singing carols.)

DINO: Where are we at?

CAITLIN: Ah. Tucson?

HELEN: If you mean the oxygen, seventeen percent.

DINO: Seventeen? On a plane the oxygen masks would have dropped out of the ceiling at this point.

Have you plotted it?

CAITLIN: It's still linear. Almost exactly one percent per month.

DINO: You realize that is almost seven tons of oxygen? Missing.

CAITLIN: And if the oxygen was simply converted to carbon dioxide through respiration, the carbon dioxide would be going up inversely to oxygen going down.

DINO: But it isn't. Our CO₂ has been bouncing around all over the place.

HELEN: Yesterday the carbon dioxide concentration in here was ten times what it is outside.

DINO: But CO₂ always goes up at night when the plants stop photosynthesizing.

HELEN: Yesterday, CO₂ hit ten times normal during the day.

BONNIE: Shit.

CAITLIN: Seven tons of oxygen is hiding somewhere in this airtight dome. But where? In the soil? Ocean? The fucking chickens?

HELEN: Well. I personally would like to find this seven tons of oxygen, because I would really enjoy breathing it.

BONNIE: Me too.

HELEN: This is horrible!

CAITLIN: This is great!

DINO: What?

CAITLIN: Don't you see! This is what we've been waiting for!

Now we finally have a problem we can really sink our teeth into.

This is so exciting! We can get the entire scientific community involved in solving this puzzle. Where did seven tons of oxygen disappear to in a closed, airtight system? I'll call Scientific American. They have been wonderful about covering us. I bet they would love to write an article about this conundrum! And let's make a presentation to our Science Advisory Committee. If anyone can discover the source of the missing oxygen, they can.

DINO: You need to pass this through Alan.

CAITLIN: (sighs)

SCENE 8

One week later. Lights up on Caitlin's room.

In her room is a painting of Metamorphosis of Narcissus by Dali. Perhaps the painting is a projection. CAITLIN enters and goes to phone. CAITLIN dials.

Lights up on Alan in his swivel chair on a raised platform. Initially his back is to us.

ALAN: (Answering phone) Hello.

CAITLIN: Alan, it's Caitlin.

ALAN: (Swinging around to face us.) Caitlin! I was just thinking about you. Any update on the oxygen problem?

CAITLIN: We're still working on it.

ALAN: You guys will figure it out.

CAITLIN: Listen, has anyone been trying to get in touch with me?

ALAN: Are you expecting someone?

CAITLIN: Um. Maybe.

ALAN: No one.

CAITLIN: His name is Bill Tremain.

ALAN: Doesn't ring a bell.

CAITLIN: He's a reporter.

ALAN: A reporter! How exciting! From where?

CAITLIN: (no reply)

ALAN: Oh! From Scientific American?!

CAITLIN: Yes!

ALAN: Yes. Yes. The Scientific American guy. He had some questions. I took care of his questions. No need to bother you.

CAITLIN: I was hoping to tell him about my research. Our research.

ALAN: What research?

CAITLIN: Into the oxygen question.

ALAN: But you don't have an answer yet, do you?

CAITLIN: No. But that is what is so exciting! We can get the entire scientific community involved in solving this puzzle. Where did seven tons of oxygen disappear to in a closed, airtight system?

ALAN: And you will talk to Scientific American when you have an answer.

CAITLIN: But. You always emphasize the importance of working together with like-minded communities.

ALAN: Caitlin, of the hundreds of Synergists that are part of our group, I selected the four Biospherians very carefully. You were one of the four that made the grade.

CAITLIN: (no reply)

ALAN: I know in my gut that I selected well.

Each of you has something special to give to this project.

Dino has a PhD in physics and is a brilliant engineer. Remember it was Dino who designed the enormous mechanical lungs that equalizes the air pressure between the inside and the outside of

Biosphere. Without Dino, the first chilly winter night in Tucson and Biosphere would have exploded like a nuclear glass bomb.

And Biosphere houses the largest artificial ocean in the world, and it is all Bonnie's creation.

Helen grew up on a ranch and has an intuitive grasp of the complexities of the insects, birds and animals in Biosphere. It was Helen who carefully matched the flowers in Biosphere to the curve of the beak of the hummingbirds. Who else would think to do that?

(pause)

And what about you? Why did I choose you?

CAITLIN: (pause) I don't know.

ALAN: You can't think of anything special that you bring to this project?

CAITLIN: No.

ALAN: When the grasses in the Savannah Biome die in the winter, do we just let them rot in the savannah?

CAITLIN: No, of course not.

ALAN: What do we do?

CAITLIN: Well, we cut the grasses and we store them in the basement over the winter and then, when spring comes, we bring them back up and compost them inside of Biosphere.

ALAN: Why do we do such a weird thing? Seems like a lot of unnecessary work.

CAITLIN: Because, as the grasses rot they release carbon dioxide that the Biosphere plants need in the spring but would just poison our air during the winter.

ALAN: What a clever idea. Who thought to do such a clever thing?

CAITLIN: (no reply)

ALAN: Each of you has something special to give to this project. What you are going to give to this project is that you are going to solve the mystery of seven tons of missing oxygen. And then you are going to share your discovery with the world.

CAITLIN: This afternoon we have our video conference with the Science Advisory Committee. Surely you do not object to me sharing this with our own advisory committee.

ALAN: Certainly, you can tell the committee.

CAITLIN: Great.

ALAN: After you have solved it.

CAITLIN: But. Let's solve it as part of the scientific community.

ALAN: There's no glory in that.

CAITLIN: But—

ALAN: I hired you to solve problems, not go crawling to others to solve them for you.

CAITLIN: You're the one always talking about synergy. Two minds together are greater than each mind individually.

ALAN: And there are four great minds here in the Biosphere.

CAITLIN: (sighs)

ALAN: Inside of an airtight enclosure, seven tons of oxygen has gone missing. You should be able to figure that out. I mean, you have a degree in art history.

CAITLIN: On the video conference call, the Science Advisory Committee will ask about the oxygen levels. They always do.

ALAN: Tell them it has been fluctuating.

CAITLIN: (sighs) We are currently at seventeen percent oxygen. If the current rate of loss continues, in six months we'll all be dead.

ALAN: So, you better get crackin'.

(**ALAN:** leaves)

(Pause)

SCENE 9

Continuous from previous scene.

Enter BONNIE

BONNIE: Knock. Knock.

CAITLIN: Bonnie, come in.

BONNIE: Hey.

CAITLIN: Hey.

BONNIE: I've never been in your room.

CAITLIN: Well, this is it.

(**BONNIE** sees painting)

BONNIE: Wow. You too?

CAITLIN: Oh. Metamorphosis of Narcissus. You know it?

BONNIE: Yeah.

CAITLIN: Alan told me about it.

BONNIE: Yeah. Same.

CAITLIN: (regards Bonnie for a moment)

BONNIE: You must have really liked it.

CAITLIN: Well, I guess that painting changed the direction of my life. I found Alan's story about the painting so fascinating that I eventually switched to Art History.

BONNIE: Oh. What were you before?

CAITLIN: Pre-med.

BONNIE: Well. Are you glad you switched?

CAITLIN: Too late now.

BONNIE: It's never too late.

CAITLIN: What about you?

BONNIE: What?

CAITLIN: I changed the direction of my life. What happened to you when Alan shared with you the fascinating history of Metamorphosis of Narcissus?

BONNIE: Nothing. Except perhaps a deeper appreciation for his breadth of knowledge.

CAITLIN: Uh-ha. His breadth of knowledge.

Alan shared his breadth of knowledge with me on his living room floor in front of the fireplace over a glass of chardonnay. How about you?

BONNIE: I can't remember where we were.

CAITLIN: Kinda ironic don't you think? Alan. Narcissus.

(BONNIE doesn't get it)

Never mind.

So, what brings you to my room?

BONNIE: Have you been in my lab?

CAITLIN: Yes. I am setting up an experiment using three of the sea water trays.

BONNIE: I would appreciate it if you would ask me before doing anything in the ocean lab.

CAITLIN: I keep thinking that you are going to be gone soon but that doesn't seem to be happening.

BONNIE: While I am here, that lab is mine.

CAITLIN: Well. Okay. Seems like you could use some help.

BONNIE: I'm doing fine.

CAITLIN: I bet the corals would have a different opinion on that.

BONNIE: Ask first. That's all.

CAITLIN: (no reply)

BONNIE: What's this experiment you are setting up anyway?

CAITLIN: Setting up three coral experiments, actually. Creating three closed environments with three different levels of atmospheric CO₂. Seeing how the coral responds.

BONNIE: I can already tell you the answer. It is in every marine biology textbook. Increases in the atmospheric carbon dioxide increases the photosynthesis of the algae that inhabits the coral

which in turn produces more nutrients for the coral. The corals are therefore healthier.

CAITLIN: Maybe.

BONNIE: What do you mean “maybe”? It’s true.

(Enter HELEN and DINO)

HELEN: Mind if we come in?

(HELEN picks up
binoculars.)

You can see it best from Caitlin’s room.

CAITLIN: What’s going on?

HELEN: Let’s see if you can spot it.

DINO: Just tell me.

HELEN: Oh, come on. Here.

(HELEN hands binoculars to
DINO)

Have some fun.

(DINO looks through binocs)

DINO: Helen is all charged up about some new thing out there.

CAITLIN: Something for the tourists?

HELEN: Yes. But that’s your only hint.

CAITLIN: Can’t believe we are getting so many tourists.

HELEN: They say we are second only to the Grand Canyon in tourist attraction.

DINO: Oh my god.

HELEN: You see it?

DINO: Oh my god.

CAITLIN: What? What is it?

(Grabbing binoculars)

DINO: Look at the hotdog stand.

HELEN: Dang it, Dino. She was supposed to find it by herself.

CAITLIN: Oh. Oh. I see it.

HELEN: They added a sauerkraut option.

CAITLIN: God. That looks soooooo good.

HELEN: This morning some kid was watching me through the glass while I was working the rice paddy and his hotdog was just buried in sauerkraut.

CAITLIN: Dino, ask mission control to move the hotdog stand closer to the dome.

HELEN: They might do it if you ask.

DINO: Ah. Okay.

I'm going to go check the news window.

HELEN: Really! I'll beat you there!

(HELEN runs off.)

DINO: Hey!

(DINO runs off.)

(Pause.)

CAITLIN: Well. They seem to be getting along.

(Lights down Caitlin and Bonnie)

SCENE 10

Lights up on area with the News Window – where people on the outside can post news items for the Biospherians. DINO approaches window

DINO: Looks like we have a new posting.

(THEY gather at the news window)

HELEN: LA Times.

DINO: Positive or negative?

HELEN: They used that photo of me in my swim suit on the Biosphere beach.

DINO: Negative. Always is when they run that photo.

HELEN: Hey!

DINO: Sorry. It's just something I've noticed.

HELEN: God Damnit. They call us Bionuts. I hate that.

DINO: BioNauts.

HELEN: Whatever. We are Biospherians. Can't they get the simplest thing correct?

DINO: Listen to this. "Where some see science, others see a depraved bacchanalian orgy of unimaginable configurations."

HELEN: An orgy? They must be referring to the cockroaches.

DINO: That's funny.

HELEN: I don't get why we have all these cockroaches. I mean, how many stowaway cockroaches could have possibly gotten in?

DINO: Only takes two.

HELEN: Okay. And what are the chances that the two stowaway cockroaches were of opposite sex?

DINO: Well, that is probably a 50/50 chance.

HELEN: True. And when they finally meet, what if they discover they aren't compatible?

DINO: We were unfortunate enough to host two cockroaches that found themselves irresistibly attracted to each other.

HELEN: And then they fucked like bunnies.

(HELEN grabs DINO and kisses him.)

DINO: (After a moment, DINO breaks away.)

Okay. Stop.

HELEN: Okay. I stopped.

DINO: What are we doing?

HELEN: I don't know. But, we have three acres.

DINO: You're right. Who could possibly find out?

(HELEN attempts to kiss DINO again)

Stop.

HELEN: Okay. I stopped.

DINO: One finger we keep going. Two fingers we don't.

HELEN: Okay.

(THEY put hands behind back)

DINO: One. Two. Three.

(THEY show hands. BOTH are holding up two fingers.)

HELEN: Shit.

DINO: Yeah.

HELEN: Can I change my vote?

(THEY embrace)

HELEN: When I held up two fingers, I hope you didn't take it wrong. It's not that I don't like you, because, well, I don't actually.

DINO: It's okay.

(Enter BONNIE)

BONNIE: Dino?

(HELEN and DINO jump apart. Guilty.)

DINO: Bonnie! Hi!!!

HELEN: (Overlapping) (overly perky) Whoa! Bonnie! Wow! Didn't see you! Hi!!

BONNIE: (Long awkward pause)

HELEN: What?

(Enter CAITLIN)

Oh, Caitlin! I'm sure glad to see you!

CAITLIN: (?)

HELEN: What are you doing here?

CAITLIN: Remember, we all got sealed inside this glass dome thingy?

BONNIE: Anyway, I just came in to say that Alan called.

HELEN: (still way too bubbly) Oh really! What did he have to say?

CAITLIN: (to Bonnie) Why is she acting like this?

DINO: So, what did Alan want?

BONNIE: Before the Scientific Advisory Committee video call, Alan has scheduled a video call with us.

CAITLIN: Good. Maybe he is finally taking the oxygen problem seriously. On the video call with the Scientific Advisory Committee, I will get their input on the oxygen problem.

DINO: Alan has been clear that the SAC is not to be brought in on this.

CAITLIN: Yeah. Okay.

SCENE 11

ALAN is on a platform in a separate sphere of light. He is communicating through a video link or the phone. However, from here on, neither Alan nor the Biospherians are looking at a TV screen or talking on the phone in order to communicate.

CAITLIN, HELEN, DINO, and BONNIE gather in chairs. ALAN is seated in his swivel chair.

ALAN: You guys don't look so good. Bonnie are you okay?

BONNIE: I'm fine.

CAITLIN: No, she isn't fine. None of us are fine. We are all suffocating.

ALAN: Right. I have been thinking a lot about this dwindling oxygen.

CAITLIN: Good. Because we think about it every time we try to take a breath.

ALAN: That's on today's agenda. But before we discuss oxygen, there is another matter that we must address.

DINO: Sure. What's up Alan?

ALAN: You have been in Biosphere for over three months now. You've all been doing a superb job. There have been a few hiccups, a few things that we didn't anticipate, but overall Biosphere is a huge success.

DINO: Thanks Alan.

ALAN: We need to remember the people who made this all possible. We need to remember the people who invested millions of dollars into this project, in the hopes that something of value would come out of it.

CAITLIN: Something of value?

ALAN: Yes. For example—

CAITLIN: We are building the foundation for colonization of other planets. Isn't that of value?

ALAN: Of course, but—

CAITLIN: Our daily logs include details of everything from the fluctuation of our atmospheric gases to the evolution of microbes in the soil to records of the health of our insect populations.

ALAN: And all of that is excellent information. But the investors were promised that Biosphere would yield commercially viable products.

We discussed this multiple times. Remember?

CAITLIN: I guess.

ALAN: Products that we could patent and sell.

Anyone have anything they are working on?

(Long pause)

HELEN: Well, actually, I'm working on something.

ALAN: Really?

HELEN: It's not quite ready to show to anybody, but it will be soon.

ALAN: Great! Anyone else?

(No one responds.)

ALAN: Well, I want all of us to focus on possible products, even if it means forgoing some of your other duties.

BONNIE: I think we are all stretched to the limit. Just trying to survive in here takes up most of our time.

ALAN: Yes. Each of you may need to reallocate your time. For example, you are spending a lot of time on your dissertation. But the corals seem to be dying. Which is fine. We all knew it was a stretch to try to establish a coral reef inside this artificial environment. Perhaps it is time to let that one go, so you can focus on other things.

BONNIE: (Tries to respond. Can't.)

ALAN: So, next item on the agenda. Oxygen.

DINO: It's steadily going down.

ALAN: Right. Well, I think I may have found the culprit.

DINO: Alan, that's great! What have you got?

ALAN: What is inside of the Biosphere?

CAITLIN: What?

ALAN: What are the things we have put inside of the dome?

CAITLIN: Well. Ah. Plants?

ALAN: Right. What else?

HELEN: Animals? Insects!

ALAN: Okay.

DINO: Dirt. Concrete.

ALAN: Good. Good.

BONNIE: Water. Air.

ALAN: Correct. What else?

HELEN: Oh! Oh! Humans!!

ALAN: Absolutely! Anything else?

BONNIE: Plants?

CAITLIN: I already said plants.

ALAN: So. What's missing?

(GROUP doesn't know.)

Look outside. What do you see?

HELEN: Um. Mountains?

ALAN: EXACTLY!

HELEN: We forgot to put in a mountain?

ALAN: Geology! We forgot to put in geology! Outside, when you look around you, rocks are everywhere. Why did we not put a single rock in here? There isn't enough geology.

CAITLIN: Which is why the carbon dioxide and oxygen are acting up?

ALAN: Perhaps. Dino, can you look into this?

DINO: Um. Sure.

CAITLIN: I'm not so sure about the cause and effect here.

ALAN: Rocks are the one thing that is missing. Can you name anything else that is missing in here that we have abundantly outside?

CAITLIN: Well. No.

ALAN: QED.

Well, you guys need to get to your Science Advisory Committee meeting. Dino, get back to me on the rock thing, okay?

DINO: Yes sir.

(Exit ALAN)

HELEN: When he asked about what they have outside that we don't have in here....

CAITLIN: Yes?

HELEN: You should have said "common sense."

CAITLIN: Dang. That would have been good.

SCENE 12

HELEN, CAITLIN, DINO and BONNIE go to area where there is a TV (90's style CRT TV). The display is not visible to the audience. They sit ready for a video conference.

DINO picks up remote. Remote does not work. HE tries multiple times.

DINO: What's the problem with the remote?

CAITLIN: Last week my remote stopped working too.

HELEN: (Going to the television) What is the deal with you people? Just do it manually.

(Turns on TV manually)

There. See. So simple.

(BONNIE is glaring at her.
HELEN avoids her gaze.)

And I just got good exercise.

(HELEN sits back down.)

PROFESSOR NOLAN (VOICE FROM TV): Is the video link working?

DINO: Yes. Hi Professor Nolan. Yes, we can see you.

PROFESSOR NOLAN: I don't see Ms. Morgan.

BONNIE: Here I am.

PROFESSOR NOLAN: Ah good. I promised you last month that I would try to bring in a guest with whom we could discuss the Biosphere coral reef. You might recognize the distinguished woman to my left.

BONNIE: Oh my gosh. Astrid Storm.

ASTRID STORM (VOICE FROM TV): Hi Bonnie.

BONNIE: I didn't recognize you without your wet suit on.

PROFESSOR NOLAN: Last month Bonnie was describing some bleaching of the Biosphere coral reef.

BONNIE: It's getting worse.

ASTRID STORM: Well. Most marine biologists didn't believe the reef would even survive transportation from the Yucatan to Arizona. It's a miracle that the coral got established at all in the Biosphere ocean.

BONNIE: It had been so vibrant and beautiful. But, despite everything I have tried, the corals are dying.

ASTRID STORM: And the fish are doing okay?

BONNIE: For the most part.

ASTRID STORM: The fish and the coral are from the same location?

BONNIE: Yes.

CAITLIN: No. The fish are from Bali.

BONNIE: The fish were collected just north of the Yucatan, just like the coral.

ASTRID STORM: Excuse me. Who are you?

PROFESSOR NOLAN: Oh. I am so sorry. This is Caitlin O'Connell. She is in charge of the extensive water systems in the Biosphere. And a jack of all trades.

ASTRID STORM: Pleased to meet you, Caitlin. So, your background is in hydraulics?

CAITLIN: Art History.

ASTRID STORM: Oh. Okay.

CAITLIN: Bonnie, I thought you told me that the fish were from Bali.

BONNIE: We were going to collect them from Bali but for financial reasons ended up taking both the fish and coral from north of the Yucatan.

CAITLIN: Well. Fish are fish I suppose. And ocean water is ocean water.

(awkward pause)

BONNIE: Caitlin—

CAITLIN: I'm sorry. I'm so sorry.

BONNIE: What temperature do you—

CAITLIN: I wanted the Balinese fish to be happy.

BONNIE: What temperature do you maintain the Biosphere ocean?

CAITLIN: Balinese temperature.

BONNIE: (waits)

CAITLIN: 88 degrees.

ASTRID STORM: Oh my god.

BONNIE: Holy shit.

CAITLIN: I'm sorry.

ASTRID STORM: The fish can handle it.

BONNIE: But not the coral.

CAITLIN: I just wanted happy fish.

BONNIE: Here's what you are going to do. Starting today you are going to lower the ocean temperature by four degrees each day until you are down to 75 degrees.

CAITLIN: Okay. Okay. Yes. I'm sorry.

PROFESSOR NOLAN: That's why we have Science Advisory Committees. Well, does anyone have anything to bring up?

HELEN/DINO/CAITLIN/BONNIE (ALL start talking at once)

DINO: (Jumping up out of his seat) GET THE BANANA!

(ALL talking stops. DINO sits back down. (HELEN ceremoniously rises and gets the Banana. SHE stands by her seat, holding the banana.)

HELEN: I hope the Science Advisory Committee will emphasize to mission control that we are all starving in here. It is becoming unbearable.

PROFESSOR NOLAN: Certainly.

HELEN: Next?

(DINO and CAITLIN raise hands. HELEN hands banana to Dino and sits. DINO rises.)

DINO: Some of us have developed sleep apnea and it is affecting our ability to function. Perhaps the science committee could ask mission control for more oxygen tanks to help certain crew members sleep through the night.

CAITLIN: But Dino, I thought—

DINO: (holding up Banana) Ah?

If more tanks are brought in, it must be with complete transparency with the media.

PROFESSOR NOLAN: Of course, we will ask mission control.

DINO: (Offering banana) Bonnie?

(BONNIE shakes head “no”)

Well, we should probably be wrapping things up.

CAITLIN: EXCUSE ME?!

DINO: I don't think there's time.

CAITLIN: GIVE ME THE BANANA!

(DINO hands CAITLIN the banana. CAITLIN rises)

Professor Nolan. The oxygen within the Biosphere has been steadily declining at a rate of about one percent per month. We are now at 18% oxygen.

PROFESSOR NOLAN: Yes. Alan told me.

CAITLIN: He... what? He forbids me to talk about it but it's okay for him to tell you?

PROFESSOR NOLAN: Alan seemed justifiably concerned.

CAITLIN: I believe the oxygen is forming CO₂ through normal respiration. But then that CO₂ is not being converted back to O₂ through photosynthesis. Instead, I believe it is somehow combining with something that is capturing the CO₂, and with it our O₂.

PROFESSOR NOLAN: I believe you are correct.

CAITLIN: You know the answer?

PROFESSOR NOLAN: Perhaps. As concrete cures it is known to absorb carbon dioxide. It is a problem in the construction industry because it weakens the concrete.

HELEN: Oh, my goodness.

PROFESSOR NOLAN: And as you say, every molecule of carbon dioxide captured means that a molecule of oxygen is captured.

CAITLIN: Are you sure about this?

PROFESSOR NOLAN: Pretty sure. But the Science Advisory Committee recommends that you take core samples of the concrete from inside the dome. We will take core samples outside the dome and compare results.

DINO: May I?

(CAITLIN passes banana to DINO)

The Biosphere contains about 15,000 cubic yards of concrete. If concrete is absorbing carbon dioxide, and with it our oxygen, what can be done?

PROFESSOR NOLAN: Nothing. We will have to pump oxygen into the Biosphere.

DINO: Alan will never approve of that.

(BONNIE violently groans.)

PROFESSOR NOLAN: Bonnie, it's okay.

(BONNIE crumples to floor.)

HELEN: (Quickly going to Bonnie) Bonnie?

(HELEN shakes BONNIE)

Bonnie?

HELEN: She's not responding. She needs oxygen. She needs to go through the airlock. NOW!

END ACT I

ACT II

ON RISE: Two days later. HELEN on stage. DINO enters.

HELEN: Any word on Bonnie?

DINO: Yeah.

HELEN: Not good?

DINO: The doctor says that she must leave Biosphere.

HELEN: Yeah. Sorry.

DINO: After she is released from the hospital, she's coming back to wrap things up, and then she's gone.

HELEN: What about you?

DINO: She's only been gone two days and I miss her. I can't imagine being separated for over a year. I want to finish this out, but... I don't know.

HELEN: Dino....

DINO: Yes?

HELEN: (pause) I'm sorry about... you know.

DINO: It's okay.

HELEN: We good now? No more awkward moments as we pass each other in the hall?

DINO: We're good.

HELEN: You know, boy-girl stuff. Do we ever move beyond junior high school?

(CAITLIN enters)

HELEN: Hey Caitlin.

CAITLIN: Hey. Dino, what time is that news segment on?

DINO: About us?

CAITLIN: Yeah.

DINO: It already aired. I watched it.

CAITLIN: Darn it. I really wanted to watch it too. How was it?

DINO: It began “Biosphere. Science or Science Fiction?”

HELEN: Typical.

CAITLIN: You know, can’t someone just give us a pat on the back every so often? We are suffocating and starving and going mad. Can’t someone just say “we are so impressed by what you are trying to accomplish”?

HELEN: What else did they say?

DINO: They said we are deceptive.

HELEN: Well. They are correct there.

CAITLIN: What else?

DINO: Let’s see. Of the thirty-five initial plant species in the savannah biome, seventeen are now dead.

HELEN: But that means over half of the plant species are still alive.

CAITLIN: Furthermore, we study which species survive and which species die and we learn from that. It’s called science.

HELEN: I wonder how the reporter learned about the plant survival rates?

CAITLIN: Bingo. They should learn about stuff like that from our monthly newsletter. Right? It’s interesting! But management has a siege mentality at this point. If seventeen plant species

die, they hide it. The press eventually discovers the deception, and because management was deceptive, the press jumps all over it as an example of yet another failure.

HELEN: What TV station was it?

DINO: Not sure. They are out of Los Angeles.

CAITLIN: Do you remember the name of the newscaster?

HELEN: All Southern California dudes are named either Chad, Sean, Denny or Brian.

DINO: That's right. Chad Barrington.

CAITLIN: How did you do that?

HELEN: I kinda have a thing for surfers.

CAITLIN: I think that Chad Barrington is with KABC in Los Angeles.

I'm calling him.

DINO: I think you should get Alan's permission.

CAITLIN: (Dialing) They can't get away with irresponsible reporting like that.

(into phone)

Chad Barrington please.

DINO: You really need to pass this through mission control.

CAITLIN: Mr. Barrington? Yes, this is Caitlin O'Connell. I am calling you from Biosphere.

(pause)

No, I am inside the dome.

No. I am not a Bionaut. I am a Biospherian.

(rolls her eyes at Helen)

I think in your report, you really should have talked to some of us on the inside.

Oh. You tried?

Anyway, I would like to just correct a few things in your reporting.

Well, sure. I think so. Tomorrow would be great.

Caitlin O'Connell. Sure. See you then.

(Hangs up phone)

He tried to talk to us. Mission control wouldn't let him.

(phone rings. Answering)

Caitlin.

Uh. Why do you say that?

That is a complete invasion of our—

Yeah right. I make calls to my therapist on this line. But I guess you know that. This is so offensive.

I don't need your permission, Alan! And stop listening to my phone calls! I can't believe this.

Yeah, right. Well, you seem to know an awful lot about my conversation from just monitoring a phone number.

(Slams down phone)

Asshole.

HELEN: They've tapped the line?

CAITLIN: He said they just see the phone number. Lying bastard.

Some day, I am going to put that guy out of my misery.

(pause)

You know what? I don't care anymore. I just don't care. Fuck mission control. And fuck the press. All assholes.

HELEN: You didn't ask Chad if he surfs.

CAITLIN: He's coming tomorrow with a camera crew. You can ask him yourself.

SCENE 2

Next day. Chad in chair in a separate light on a platform. Chad must communicate via phoneline or video link. But we don't see that.

A single chair is facing reporter

CAITLIN: (Entering) Sorry I'm late. I was pollinating.

CHAD: Excuse me?

(CAITLIN sits)

CAITLIN: The cockroaches killed all the bees. So, we pollinate by hand now.

CHAD: Heavens.

(Lights up ALAN, on platform.)

ALAN: Hello Chad, I'm Alan.

CHAD: Wow. We've talked on the phone many times. A privilege to finally meet you.

ALAN: And you've met Caitlin.

CAITLIN: What are you doing here?

ALAN: Just thought that I would cover any areas of questioning that you aren't prepared to answer.

CAITLIN: I think I'll be fine.

CHAD: Let's get started, shall we?

We are here at Biosphere with the founder of the Biosphere project, Alan Brown. And we are privileged to have one of the Biospherians, Caitlin O'Connell.

ALAN: Thank you for having us.

CHAD: We are following up on yesterday's report on the Biosphere.

CAITLIN: Yes, I feel there were several inaccuracies in your reporting that I would like to clarify.

CHAD: We will explore all of that.

CAITLIN: Good. For example, I think that—

ALAN: Caitlin.

(CAITLIN stops)

Go ahead.

CHAD: A concern among the scientific community, and the public at large, has been that Biosphere is not scientific. The hypothesis that you are testing is not clear. The experiment is not clear.

CAITLIN: We have been enclosed in an airtight dome for almost half a year. Due to our efforts in the Biosphere, we aren't dead. Is that science?

CHAD: I don't know. Typically, science tests little questions to get answers to big questions. But, quoting now from a recent Life Magazine article

about Biosphere, “They’re not asking a question: they’re saying ‘suppose we build this thing? What’s going to happen?’ That’s a question, in a way, but it isn’t science.”

ALAN: These “little questions” that you refer to have come to define what is good science.

Now, let me ask you this. What little question was Darwin asking when he hopped on The Beagle to sail around the world? He had no question. He was driven by curiosity and the need for adventure. He did not set out to develop the theory of evolution. It just grew organically from his adventures.

So. Was Darwin doing science? He most certainly was.

CHAD: But at least Darwin had a science background. Only two of the four crew members in Biosphere have a science background.

CAITLIN: Tell you what. When you get home tonight, before going into your house, turn off the water main. Now go inside and lock the door. You can go anywhere in your house as well as into your backyard. But nowhere else. In the backyard you can grow food if you want. And I would strongly suggest that you do. But no groceries. And whatever water was in your hot water tank, that is the water that you have to use. So, you better recycle.

Now, stay there for two years.

And at the end of two years, do you think that only a scientist will still be alive? Anyone else, any non-scientist, will be dead?

CHAD: I think that the experiment will only be of value to our understanding of the world if the occupant is a scientist. Otherwise, what analysis is there about the conditions that allowed the occupant to survive for two years?

CAITLIN: We have a Science Advisory Committee that includes preeminent scientists from NASA, the Smithsonian Institute and major universities across the country and around the world. That committee provides—

CHAD: Yesterday that committee quit.

CAITLIN: The Science Advisory Committee quit?

ALAN: Well. We had differing opinions on the direction of Biosphere.

CHAD: My understanding is that the committee wanted to go in the direction of scientific integrity and Biosphere management was more interested in going in the direction of self-promotion.

CAITLIN: They quit?

CHAD: One last question. Since Biosphere is producing results, according to you, do you intend to present your findings at next year's Rio Earth Summit? That is the most important international gathering of nations to address man's impact on the earth's ecology.

ALAN: We will not have completed our two-year mission by next year.

CHAD: Too bad. But if you were to present findings from your 150-million-dollar project, what might we expect?

CAITLIN: It would probably be that microbes rule. Insects rule. Algae rules. We humans must consider the impact of our actions on little things, because these little things can kick our ass. Or, if treated with respect, they can save us.

CHAD: Thank you to our guests Caitlin O'Connell and Alan Brown. This is Chad Barrington reporting to you live from Biosphere in Arizona.

And cut.

Well, that was an interesting segment.

(ALAN quietly leaves)

CAITLIN: I didn't say anything that I intended to say.

CHAD: I'm sure we'll be out again.

CAITLIN: You don't surf do you?

CHAD: No.

CAITLIN: (scoffs.)

SCENE 3

HELEN on stage. CAITLIN enters.

HELEN: How was Chad?

CAITLIN: (Collapses in chair.)

HELEN: It didn't go well?

CAITLIN: Did you know that the Science Advisory Committee quit?

HELEN: Shit.

CAITLIN: I don't blame them, with mission control telling them that the problem with the oxygen is we forgot to put in a mountain.

HELEN: Without the SAC backing us up, who is going to believe any of our research?

CAITLIN: (Shakes her head. Tearing up.)

HELEN: What?

CAITLIN: I've dedicated years to this project. I've kissed up to Alan for years so I could one day be a Biospherian. For what? What is this thing we've created?

HELEN: We're doing important research.

CAITLIN: Really? What research? Chad asked us what Biosphere would be contributing to the upcoming Rio Earth Summit. That is a major international conference centered on ecology. We should be all over that conference. But we have nothing. Nothing to contribute.

Biosphere is all bullshit.

(pause)

And you know what else is bullshit? Me.

HELEN: Caitlin, come on. You—

CAITLIN: No. It's true.

I'm a complete fraud. What do I know? About anything? I was selected for Biosphere because I have been a faithful servant. I have nothing to offer.

HELEN: I think most people with any self-awareness feel that they are just bluffing their way through life and that they will eventually be found out.

I feel that way.

CAITLIN: Really? You? But you grew up on a ranch. You've traveled around the world. You know stuff that is actually useful in here. You know how to ride a fucking horse.

HELEN: Well....

CAITLIN: I wish I knew how to ride a horse.

HELEN: If we ever get out of here, I will teach you how to ride a horse.

CAITLIN: I was on the cover of Time Magazine. And for what? For what? This entire project, that I have dedicate my life to, is a complete fraud. It is worthless. As am I.

What have I done with my life?

HELEN: You're having a bit of a mood, aren't you?

SCENE 4

CAITLIN wanders off into the area of the Biosphere ocean. The water shimmers, ripples of light dancing on Caitlin's face. Waves lapping against the shore of the Biosphere ocean can be heard.

CAITLIN stares into the water.

ALAN appears like a dream, in a separate light.

ALAN: It's beautiful, isn't it?

CAITLIN: It was prettier before I destroyed it.

ALAN: It's coming back.

CAITLIN: No. It isn't. The corals are not coming back. Something is wrong. Like it wasn't just the temperature of the water that was causing the coral degradation.

ALAN: You'll figure it out.

CAITLIN: Do you ever think about all the wonderful things that 150 million dollars could have bought?

ALAN: It did buy a wonderful thing.

CAITLIN: We could have created a wind mill farm. Or developed a new electric vehicle. Or wiped-out homelessness in the state of Arizona. But instead, we built a three-acre resort for cockroaches.

ALAN: What we are doing has never been attempted. Can a life system that evolved over billions of years on a planetary scale be bottled up?

Can we introduce humans into that life system and have them survive?

CAITLIN: We are supposedly running a scientific experiment, not an exercise in survival.

ALAN: Scientific experiments are not covered by the nightly news. We are in the news because this is dangerous. The possibility that you might all die captures the imagination of the American public.

What draws people to watch Evel Knievel jump his motorcycle over a dozen cars? It is not the opportunity to watch him succeed, but rather the opportunity to watch him fail.

CAITLIN: I'm not sure I like where we are going with this.

ALAN: This year, we will get half-a-million visitors. Millions more learn about us from the media. From Biosphere, they are learning about the fragile interconnectedness of life. And the only reason they are learning about us, is because of the four of you, and the tremendous risks you are taking by surviving in this airtight dome.

CAITLIN: Is it worth it?

ALAN: Maybe you will make it worth it.

(ALAN leaves)

(CAITLIN stares into the water.

Lights fade on Caitlin)

SCENE 5

HELEN on stage. BONNIE enters.

HELEN: Hey! Bonnie! Welcome back! We've missed you!

(THEY hug)

BONNIE: Thanks. Where's the rest of my welcoming committee?

HELEN: Mission control didn't tell us you were returning today.

BONNIE: Well, everyone else in the world knows I'm returning today. Outside is swarming with news organizations. It's a total circus right outside the airlock. They were all barking out questions to me.

HELEN: What kind of questions?

BONNIE: I don't know. Their questions used the word "failure" a lot. And "compromised."

HELEN: What did you say to them?

BONNIE: Nothing. Alan told me to not say anything. Let him do the talking.

HELEN: Of course.

BONNIE: I went out, and I came back in. So, is Biosphere a failure now, like they're saying outside?

HELEN: It doesn't feel like a failure to me. But the media seems to want us to fail. Like they hate us.

BONNIE: They hate Alan.

HELEN: They don't differentiate between Alan and us.

(pause)

So... how was it?

BONNIE: The hospital?

HELEN: Well, everything. How was it outside? What's it like?

BONNIE: Within seconds of going outside it was like a huge weight was lifted from me. My head cleared. I started running.

HELEN: Yeah, we saw you. We thought you were running away.

BONNIE: I felt euphoric.

HELEN: We were all cheering you! You ran straight to the hotdog stand.

BONNIE: What a time to forget my wallet!

HELEN: Did you hear us inside? We were all calling out our orders!

BONNIE: That kid would have given me a hotdog, too.
Four hotdogs!

HELEN: Everyone would have forgiven you. A hotdog was medically indicated.

BONNIE: Yeah.

HELEN: So now what?

BONNIE: The doctor said the obvious.

HELEN: You need to leave?

BONNIE: (shakes head “yes”)

I’m just here to wrap things up. Then I am gone for good.

HELEN: But what if Mission Control pumps in oxygen?

BONNIE: The doctor said that I can only stay if the oxygen is pumped back up to 21%. Otherwise, I need to leave.

HELEN: Caitlin is working on a solution. She is talking to Alan about pumping in oxygen.

BONNIE: Really? I might not have to leave?

HELEN: Increased oxygen will help you with your migraines and help all of us feel better and perform better.

BONNIE: Seriously? I might get to stay?

HELEN: We are at 18% and dropping. He can’t possibly expect anyone to work without adequate oxygen. Let’s see if Caitlin can talk some sense into him.

(CAITLIN storms in. Throws her satchel [or something] onto the table. She is pissed.)

(pause)

HELEN: How did it go with Alan?

(CAITLIN fumes. Notices Bonnie)

CAITLIN: Bonnie, welcome back!

BONNIE: Thanks. So, you talked to Alan about oxygen?

CAITLIN: He's not going to do it. I'm sorry.

He thinks you should leave Biosphere.

BONNIE: Really? What about my Ph.D? What about the rest of you? My leaving doesn't solve the basic problem.

CAITLIN: (Shakes head. Disbelief.)

He. He has lost faith in your dissertation.

BONNIE: What!?! Because the corals are dying? Did you—

CAITLIN: I told him about the water temperature. I told him that the coral problems are all my fault.

BONNIE: (Upset)

HELEN: If Mission Control pumps in oxygen, he probably believes that Biosphere will be perceived as a complete failure.

CAITLIN: But science doesn't work like that. An experiment is only a failure if nothing is learned from it.

BONNIE: I agree.

CAITLIN: Really? I thought you were determined that nothing goes in or out of Biosphere. Including oxygen. Come hell or high water.

BONNIE: Yeah. I know. I've been... I'm sorry.

HELEN: I have an idea.

CAITLIN: Okay.

HELEN: I'll write up a press release. How we ran core samples on the inside and outside of Biosphere and we determined that the concrete is absorbing our oxygen. Talk about how interesting that is. Get quotes from the Science Advisory Committee members. They can say that the only solution is to pump in oxygen to make up for the oxygen absorbed by the concrete.

BONNIE: Good. Emphasize that the absorption of oxygen by the concrete is a valuable contribution to scientific knowledge.

CAITLIN: Great!

BONNIE: Better to find that out here than on Mars.

HELEN: Exactly.

BONNIE: How could Alan possibly object to that?

HELEN: Well. Mission Control has not exactly been a fan of the truth.

BONNIE: Pass this by Alan. The press release must come from him.

HELEN: And if he doesn't approve?

BONNIE: I think he will approve it.

CAITLIN: Once he reads it, he may block us from contacting the press directly.

BONNIE: You actually think he would block our phone and fax lines?

CAITLIN: I think he has the power to do that if he chooses.

HELEN: Maybe we should send the press release directly to the press now.

BONNIE: Give Alan a chance to do the right thing.

CAITLIN: (pause) Okay. But we're taking a risk. Helen?

HELEN: I'll work on the press release today.

I walk past the airlock every day. I have never been tempted to open it until recently. This is just becoming unbearable.

BONNIE: What's the water temperature now?

CAITLIN: Seventy-nine degrees. But the coral is continuing to bleach.

BONNIE: It may take a while for the coral algae to spring back to life.

HELEN: I don't get what you are talking about.

BONNIE: Coral is an animal. It gets energy from the algae that inhabit the coral. The algae gives coral its vibrant colors.

CAITLIN: But when the coral is stressed, for example someone innocently sets the ocean temperature ten degrees hotter than it is supposed to be, then the coral expels the pretty algae and the coral looks dull.

BONNIE: That is called bleaching. If the stress continues the coral dies. But if the stress is reduced, the coral may revive. That is what we are hoping for with the Biosphere corals.

CAITLIN: I am really sorry I messed up the ocean temperature.

BONNIE: Most biologists predicted that by now Biosphere would be covered in green slime. So, just having dull coral doesn't seem so bad.

CAITLIN: I'll keep reducing the water temperature until we are down to 75 degrees.

BONNIE: Good.

CAITLIN: And, I am going to continue to run coral experiments in the marine lab.

BONNIE: Caitlin, the corals are bleaching because you set the water temperature too high. We really don't need your experiments anymore.

CAITLIN: You're probably right. But we should rule out other possibilities.

BONNIE: Like what?

CAITLIN: The impact of atmospheric CO₂ on coral reefs.

BONNIE: I told you. Every marine biology text book states that increased CO₂ increases the health of the algae which in turn increases the health of the coral. It is one of the few examples of greenhouse gases having a positive impact on the health of the planet.

CAITLIN: We'll see.

BONNIE: But—

HELEN: Bonnie, did you eat a hotdog out there?

BONNIE: No. Just some hospital food.

CAITLIN: Oh, tell us!

BONNIE: Salisbury steak.

HELEN: Oh god, really? With gravy?

BONNIE: Yes.

CAITLIN: Tell us more. Mashed potatoes?

BONNIE: Yes.

HELEN: Oh, fuck me.

CAITLIN: Did you put some of the gravy on the mashed potatoes?

BONNIE: Yes.

HELEN: Oh, fuck me hard!

CAITLIN: Hospitals always have pudding for dessert.

(DINO walks in, unseen)

HELEN: Did you have pudding?

BONNIE: Jell-O.

CAITLIN:/HELEN: Oh, my god, YES!

(CAITLIN and HELEN realize that DINO is watching.)

Hi.

BONNIE: Dino!

DINO: Bonnie!

(THEY hug)

I've missed you!

Did you hear, Caitlin is talking to Alan about pumping in oxygen so you can stay. Right Caitlin?

CAITLIN: (SHE shakes her head "no") Sorry.

SCENE 6

Next day. Lights up on BONNIE in bed. DINO walks in with a sweet potato that has two birthday candles impaled on it.

DINO: Happy anniversary!

BONNIE: (Waking) Oh. Oh my. I... ah....

DINO: Forgot.

BONNIE: Yeah.

DINO: It's okay.

BONNIE: I lose track of time in here. Has it really been two years since our wedding?

DINO: So that makes it our, what, anniversary?

BONNIE: Like what gift?

DINO: Yeah.

BONNIE: I hope it's our chocolate anniversary.

DINO: Yeah. Or our steak anniversary.

BONNIE: God. Please let it be our French Fries anniversary.

DINO: (sits on side of bed) How you feeling?

BONNIE: Horrible.

DINO: Yeah.

BONNIE: Has Alan read Helen's press release about pumping oxygen into Biosphere?

DINO: He hasn't mentioned it.

BONNIE: That's not a good sign.

DINO: What will you do if he doesn't increase the oxygen?

BONNIE: I will leave.

DINO: I'll go with you.

BONNIE: You have spent years training to be a Biospherian.

DINO: Do you... want me to come with you?

BONNIE: We will be separated for a little over a year. We can do this.

DINO: Well. I'll think about it.

BONNIE: If me leaving causes you to leave, I will never forgive myself. You will never forgive me. Please stay.

DINO: I'll think about it. If you leave, what happens to your dissertation?

BONNIE: My dissertation is on the Biosphere coral reef. If I leave, my dissertation is over.

DINO: We're going to be okay. No matter what happens, we are going to survive.

BONNIE: Okay.

I am supposed to meet with Caitlin in an hour. She is convinced that the corals are not dying because of the water temperature.

DINO: She just feels guilty about setting the water temperature too high.

BONNIE: Yeah.

So, we have an hour to celebrate our anniversary.

DINO: Scoot over.

(Lights down on Dino and Bonnie.)

SCENE 7

Lights up on Caitlin and Helen in the ocean lab.

CAITLIN: I need to figure out what is happening with the corals. I think this is important. Maybe. I don't know.

(BONNIE enters. SHE is carrying a brown paper bag.)

BONNIE: Good morning, ladies!

(CAITLIN and HELEN stare)

What?

HELEN: You seem chipper.

BONNIE: It's our two-year anniversary.

HELEN: Oh.

BONNIE: So, what have you got?

HELEN: What did you do to celebrate your two-year anniversary?

BONNIE: (smiles)

HELEN: God damnit.

BONNIE: Once for each year.

I'm sorry. I shouldn't have said—

HELEN: It's okay. I really should just—

BONNIE: The second time wasn't even that good.

(Pause. HELEN stares at her)

Well okay. Actually, both times were pretty—

CAITLIN: CAN WE PLEASE FOCUS!

BONNIE: I'll probably get a urinary tract infection.

HELEN: God, I'd give anything for a urinary tract infection.

CAITLIN: PLEASE!

HELEN: Okay.

BONNIE: Have you heard back from Alan about the press release?

HELEN: Yes.

BONNIE: And?

HELEN: (shakes her head)

BONNIE: And he knows that years of work on my thesis will be useless if I have to leave?

HELEN: Yes. I used those exact words.

BONNIE: Why? Why would he do this?

Your press release is beautiful. Any moron can read what you wrote and understand that we need to pump in more oxygen. Why is he opposed to this? What is he getting out of this?

HELEN: Maybe you should ask him.

BONNIE: Yeah. Okay. I will.

HELEN: I'm sorry.

BONNIE: My doctor says I should leave today. I told him that there is the chance that oxygen will be pumped in.

(pause)

My head is killing me.

CAITLIN: So. If you are going to leave, I really need to show you what I have been working on. Get your input.

BONNIE: Okay.

CAITLIN: On this graph, I am trying to separate out variables like you told me to.

So, I have these different, like, trays.

BONNIE: Okay.

CAITLIN: So, each tray contains coral and algae. I've exposed each of the trays to different levels of atmospheric carbon dioxide.

BONNIE: (studying the graph) You're graphing the carbonate ion? Why?

CAITLIN: Well. As you know the carbonate ion is needed to form calcium carbonate which is the building block for corals and shells.

BONNIE: Okay.

HELEN: And it looks like from your graph that the building block for corals goes down as atmospheric carbon dioxide goes up.

CAITLIN: Correct.

BONNIE: How do you even know about carbonate ions?

CAITLIN: I've been reading.

BONNIE: Reading?

CAITLIN: Yeah.

BONNIE: Reading what?

CAITLIN: Mostly this book.

BONNIE: That's my old college chemistry textbook. I hated that book.

CAITLIN: Oh, yeah? I think it's really good.

And look at this. I expected that the algae would grow more with increased CO₂, like you said it would.

BONNIE: Hmm. But it doesn't. It's like the health of the algae is saturated at current levels of CO₂ in sea water?

CAITLIN: Yeah, yeah, yeah. That's a good word. Saturated.

HELEN: So, increasing CO₂ does not make the coral algae more robust, but it does jeopardize the building block of the coral.

CAITLIN: Correct. So, maybe when I set the ocean temperature ten degrees higher than it was supposed to be, maybe that wasn't what caused the coral to die?

BONNIE: Yeah.

(BONNIE is holding back tears)

CAITLIN: Maybe it's the higher level of carbon dioxide in the Biosphere atmosphere.

BONNIE: (shakes her head.)

CAITLIN: Bonnie?

I don't understand what's happening right now.

BONNIE: (Composing herself) You know that CO₂ is the result of burning fossil fuels, like gas in cars?

CAITLIN: Yes, of course. It is a greenhouse gas.

BONNIE: When is the Rio Earth Summit?

CAITLIN: Next year.

BONNIE: Twenty-five percent of sea species live in coral reefs. Messing with corals messes with the health of the entire planet.

CAITLIN: That sounds important.

BONNIE: (flustered) I'm sorry. I...

(BONNIE runs off)

HELEN: What was that all about?

CAITLIN: I'm not sure. Oh crap. I have farm duty. Bye.

(Exit CAITLIN)

(HELEN notices a brown paper bag that wasn't there before. Turns bag over. Dozens of double A batteries pour out.)

HELEN: Saved!

(HELEN gathers up the batteries and runs off)

(Pause. Lights remain up)

SCENE 8

BONNIE re-enters the ocean lab. Hesitates. Goes to Caitlin's notebook. Begins reading. Absorbed.

Lights up ALAN He is outside the dome, on a raised platform. But is communicating with Bonnie without a phone. The magic of theatre. ALAN watches Bonnie for a moment, unnoticed.

ALAN: Well?

(BONNIE jumps, Startled.
She slams the notebook
shut.)

Kinda impressive, don't you think?

BONNIE: You know what's in these notebooks?

ALAN: I know everything.

(BONNIE begins to leave)

Where are you going?

BONNIE: I need to leave.

ALAN: But we haven't spent time together in so long.

(BONNIE continues to walk
away)

I've missed you.

(BONNIE stops)

Have you missed me?

BONNIE: That was a long time ago Alan.

ALAN: What did Dino say when you told him?

BONNIE: (No reply)

ALAN: Ah. That's what I thought. You really should be more honest in your marriage.

BONNIE: (No reply)

ALAN: I think about us being together. Often. Maybe when you are on the outside again, we can spend some time together.

BONNIE: (No reply)

ALAN: Like we used to.

BONNIE: We need oxygen Alan.

ALAN: But then I can't see you.

BONNIE: Pump in oxygen. Then, when the mission ends, I'll come see you.

ALAN: I don't think so.

BONNIE: Do you understand that without oxygen, I have to leave. And my dissertation is done. And all these years of my life that I have spent are completely wasted?

ALAN: Bonnie. Your dissertation is shit. If it wasn't shit you would have finished it long ago.

BONNIE: (Shaken.)

ALAN: Your committee chair is a dullard who doesn't have the intelligence to recognize that your dissertation is shit.

Caitlin! Caitlin on the other hand, Caitlin is on to something big.

BONNIE: (Begins sobbing, but hides it.)

ALAN: So. You are going to leave.

BONNIE: And then Caitlin.... Caitlin will....

ALAN: Caitlin won't do anything. Because when you leave the ocean lab will go with you.

BONNIE: What?

ALAN: Caitlin doesn't own the lab. Biosphere owns the lab. And I am the executive director of Biosphere and I want the lab to go with you.

BONNIE: I don't know about---

ALAN: Unlike your dissertation, her research is actually important. Her research needs to be verified and published. With Biosphere as the source of the research. We need this publicity. And no respectable marine biology journal is going to publish the work of an art historian, no matter how groundbreaking the research it is.

BONNIE: (unsure how to respond)

ALAN: This research needs to be presented at the Earth Summit in Rio. And you should make that presentation.

BONNIE: (pause) Okay.

ALAN: We will get both you and the lab out tomorrow.

BONNIE: Yeah.

ALAN: And you will come see me?

BONNIE: (Long pause. Shakes her head "Yes")

And then you will pump in oxygen? For them?

ALAN: Of course. Otherwise, it would just be cruel, don't you think?

(Lights down Bonnie and Alan)

SCENE 9

Later that day. Helen standing, facing a group of chairs. DINO and BONNIE sit in chairs.

HELEN: Okay everyone. Dino. Bonnie.

Welcome.

I want to practice my presentation on you all before I present to the big wigs.

DINO: Where's Caitlin?

HELEN: I thought you might ask. Caitlin?

(CAITLIN enters, pushing a huge terrarium on wheels.

(CAITLIN then joins Bonnie and Dino to watch the presentation.)

So. As you know, the investors were promised that they would recoup some of their investment because Biosphere would produce commercially viable products.

BONNIE: What is that thing?

HELEN: This is the prototype. I call it BioAir.

CAITLIN: Ooh. I like the name.

DINO: What does it do?

HELEN: Well. As we all know, plants are important in providing oxygen.

DINO: That might be an understatement, but continue.

HELEN: So, in enclosed environments, such as a home or office, the air tends to become stale. But now we have BioAir, to freshen any room.

CAITLIN: Ah. It's just a terrarium.

HELEN: Yes. A terrarium, true. But with several significant enhancements.

First. These are no ordinary plants inside. These plants come from the world-famous Biosphere!

BONNIE: I like that.

HELEN: And a typical terrarium is often a closed environment, so all the yummy oxygen that it generates remains locked up inside the glass dome.

DINO: But not so with the innovative BioAir!

HELEN: Exactly.

CAITLIN: Don't tell me. The BioAir features BioHoles??

HELEN: Are you making fun of me?

BONNIE: No, she's not. Please continue.

HELEN: Now I'm embarrassed.

CAITLIN: Helen, I'm sorry. Please continue. I beg you.

HELEN: The BioAir doesn't feature BioHoles. It instead boasts eight BioPorts.

CAITLIN: I like that better.

HELEN: And these eight BioPorts are not at the top of the terrarium as you might expect, but rather they are at the soil level.

DINO: So, how—

HELEN: Ah. Patience. Dino was about to question how BioAir could possibly circulate stale air from the outside if the BioPorts are blocked by soil.

DINO: I was gently wondering that, yes.

HELEN: How many of you noticed the electrical cord coming off the BioAir unit?

(ALL raise their hands)

Excellent.

The air purification function of BioAir isn't passive, but rather active. A fan at the top of the unit gently draws in air through the soil, into the restorative environment of the BioPlants, and then out the top to be enjoyed by humans lucky enough to be breathing in the vicinity of the BioAir.

My assistant Caitlin will now plug in the unit to demonstrate the very first commercially viable product to spring for Biosphere.

Caitlin?

(CAITLIN takes the electrical cord and plugs it into an outlet. Immediately a fan much too big for the terrarium begins whirling, blowing soil and plants all over the inside of the terrarium, forming a swirling brown mess inside the glass dome.)

(CAITLIN quickly unplugs the BioAir unit.)

(Pause)

HELEN: Rats.

DINO: Hey. It's okay. It's a prototype.

(CAITLIN and DINO leave.
BONNIE stays)

BONNIE: That's why we have dry runs. Right?

HELEN: Yeah. I guess. It was the smallest fan I could find.

BONNIE: Let me help you clean up.

HELEN: Thanks.

BONNIE: Can I get your opinion on something? Woman to woman?

HELEN: Sure.

BONNIE: It's about my dreams. Something I have been wondering about.

HELEN: Okay.

BONNIE: Alan is in my dreams, probably three nights a week.

Dino and I have been married two years, Dino has never been in my dreams.

(pause)

What do you think it means?

HELEN: I think it means you should leave and take Dino with you.

BONNIE: Dino has worked so hard to become a Biospherian.

HELEN: You don't want to leave Dino here.

BONNIE: Yeah. Okay.

SCENE 10

Lights up DINO. Then, lights up ALAN, on platform.

ALAN: Happy anniversary.

DINO: Hey Alan. Yeah thanks. How did you know it's our anniversary?

ALAN: Part of my job, to know things.

Like I know that Bonnie's doctor insists that she leave Biosphere.

(BONNIE enters. Sees them talking. Remains in the shadows and listens.)

DINO: Her doctor insists that she be in an environment with normal oxygen levels.

ALAN: Exactly.

DINO: So, pump in oxygen.

ALAN: That would defeat what we have all worked so hard to achieve.

DINO: I will leave with her.

ALAN: But you worked so hard to become a Biospherian. Seems a shame to throw it away if you don't have to.

DINO: Yes, I know.

ALAN: But when Bonnie comes back out, we will take the ocean lab out of Biosphere and get her set up on the outside. She can have whatever instrumentation she needs. It will be much better for her.

DINO: That's up to Bonnie.

ALAN: If the research into the corals yields something worthy of publication, it would be a real boost for her career.

DINO: Yes, I know. But--

ALAN: And an article published in a respected journal could help with our funding.

DINO: I see how you could use some good publicity.

ALAN: You and Bonnie will only be separated for a little over a year. It's an unfortunate situation but ultimately in everyone's best interest.

DINO: (pause) Okay.

ALAN: So. I can count on you to continue to be my right-hand man inside of Biosphere?

DINO: I need to talk to Bonnie first, but I think so.

ALAN: Good.

(DINO leaves)

(After Dino is gone, BONNIE steps out from the shadows.)

ALAN: Oh Bonnie, we were just talking about you.

BONNIE: What are you doing Alan?

ALAN: Dino and I were discussing the future.

BONNIE: You promised that you will pump in oxygen if I leave.

ALAN: And come see me. Yes.

BONNIE: You didn't tell Dino that you are going to pump in oxygen after I leave.

ALAN: It's going to be a surprise.

BONNIE: I don't trust you.

ALAN: Bonnie. I am a man of my word.

SCENE 11

Next day. BONNIE, DINO, HELEN in chairs. ALAN is in his swivel chair

ALAN: We will hate to see you go Bonnie. But everyone should know that Bonnie will be taking the lead in our coral research. And Dino will still be with you all on the inside. Right Dino?

DINO: Yes.

(CAITLIN storms in)

CAITLIN: Where's my lab?

ALAN: Your lab?

CAITLIN: My notebooks, the experiments. My textbooks.

BONNIE: Those are my textbooks.

CAITLIN: Which you apparently don't understand. Where is all my shit??

ALAN: The Biosphere ocean lab is moving to a new location.

CAITLIN: Where?

ALAN: Caitlin, you have laid the groundwork for extremely important findings in coral research. Now Bonnie will be continuing your work in a much more sophisticated lab on the outside.

CAITLIN: Bonnie will be leading the coral research?

ALAN: Yes. And Nature Magazine has expressed interest in our article.

CAITLIN: What article?

ALAN: The article that Bonnie and I are writing.

CAITLIN: This is my research.

ALAN: Absolutely. But you know how these journals are. They look at the credentials of the authors.

CAITLIN: Credentials! I graduated summa cum laude from Yale. What shit-ass school did you graduate from?

HELEN: Caitlin!

CAITLIN: I was finally doing something that was giving my life meaning.

ALAN: And your work is going to get out there, in one of the most respected science magazines in the country.

BONNIE: And then I'll be able to present the paper at the Rio Earth Summit.

CAITLIN: But I want to be doing that.

ALAN: The conference takes place while you are still in Biosphere. It has to be Bonnie. And me.

DINO: Wait. You are going down to Rio together?

BONNIE: Well. I haven't—

ALAN: This will make a significant contribution to our understanding of the impact of greenhouse gases on our planet.

CAITLIN: And I want to take part in that. And yes, Alan, I want acknowledgment for my part in this discovery.

ALAN: And I'm the one with the narcissistic personality disorder?

CAITLIN: I never said that. However, that is what my therapist said to me, during my confidential phone call with her last week.

(Pause. She is about to explode.)

I think you should resign.

DINO: What! Alan started—

BONNIE: Caitlin, I know you are—

CAITLIN: You have single handily turned what should—

HELEN: Can we all just—

BONNIE: Please -

DINO: GET THE BANANA!

CAITLIN: FUCK THE BANANA!

(to Alan) You have single handily turned Biosphere into a punch line of late night TV.

(To the others) If he resigns maybe the Science Advisory Committee will come back.

While Alan is in charge, the SAC will have nothing to do with us.

ALAN: The committee was trying to take over control of the Biosphere.

CAITLIN: The committee was trying to make Biosphere based on science instead of based on your ego.

ALAN: Look. This is supposed to be a happy farewell party for Bonnie. An exciting time as she begins to research one of the most important discoveries in marine biology in years.

CAITLIN: (to Dino) And you're staying behind?

DINO: It's just a little over a year.

CAITLIN: And you're okay with them going down to Rio together?

DINO: I don't know. This is the first I have heard of it.

CAITLIN: Well. You seem very forgiving. That's all.

BONNIE: Okay. Can we just move on to discuss—

DINO: Forgiving of what?

BONNIE: Caitlin, we should discuss putting your name on the—

CAITLIN: Forgiving of the affair that Bonnie had with Alan while you were in the Yucatan.

(pause)

DINO: What?

Bonnie?

BONNIE: (no reply)

DINO: While I was in the Yucatan?

(Stands. Looks at Bonnie.
Looks at Alan. Leaves.)

(Long pause)

ALAN: I am so sorry.

BONNIE: Yeah.

ALAN: For everything.

BONNIE: Yeah. Me too.

SCENE 12

Three weeks later. BONNIE is sitting at a café table, wearing sun glasses. CAITLIN enters, also wearing sun glasses.

CAITLIN: Bonnie?

BONNIE: Caitlin!

(BONNIE stands. CAITLIN begins to hug her.)

BONNIE: (Fending off Caitlin) No. Sorry.

CAITLIN: You still kinda hate me?

BONNIE: Yeah. Kinda.

CAITLIN: No worries.

BONNIE: Let's just ease into this.

CAITLIN: (Indicating sun glasses) You too?

BONNIE: Yeah. Was it always so bright outside?

CAITLIN: I know! And the smells! The world out here doesn't smell like musty old wood chips.

BONNIE: And I just ordered coffee that I didn't need to grow from seeds and then harvest and then roast and then grind myself.

CAITLIN: Isn't it magical!

(Awkward pause)

So, I need to ask...

BONNIE: We're still married.

CAITLIN: Thank God.

BONNIE: No thanks to you.

CAITLIN: I was angry. I knew your marriage would survive.

BONNIE: You know nothing about my marriage.

CAITLIN: Bonnie—

BONNIE: And don't pretend like you care. Because you don't.

CAITLIN: This isn't really going how I expected.

BONNIE: Okay. I'm good now. How about you? Anything you wanted to say?

CAITLIN: I'm sorry.

BONNIE: Thank you.

CAITLIN: You're good now?

BONNIE: Well. I do need to tell you something. I lied to you.

CAITLIN: Okay.

BONNIE: Metamorphosis of Narcissus. I said I couldn't remember where Alan and I were when he told me all about that painting.

CAITLIN: Ah. Let me guess. On the floor, in front of his fireplace, over a glass of chardonnay?

BONNIE: Yes.

CAITLIN: Did he tell you the story of Dali taking the painting to Sigmund Freud?

BONNIE: Of course.

CAITLIN: And from Alan waxing poetic about Sigmund Freud...

BONNIE: Pretty soon the discussion turns to women's repressed sexuality.

CAITLIN: Next thing you know you're spreading your legs to prove Freud wrong.

BONNIE: Do you mind if I ask?

CAITLIN: No, I did not let that asshole touch me. Instead, I changed the entire trajectory of my life by switching from pre-med to art history.

BONNIE: Maybe you should have kept your life and spread your legs.

CAITLIN: Well. That probably would have made Freud happy.

BONNIE: Alan is a hateful person, why did we both find ourselves sucked into his vortex?

CAITLIN: Well. You know what Henry Kissinger said.

BONNIE: (?)

CAITLIN: "Power is the ultimate aphrodisiac."

BONNIE: Yeah. Sad. I was an idiot.

CAITLIN: So. Where is everybody?

BONNIE: Chad is getting setup inside. Let's go see.

SCENE 13

THEY walk to a different area of the stage.

Lights up on Chad in the other area.

CHAD: Hey! Caitlin! Bonnie!

(THEY shake)

BONNIE: In real life!

CHAD: I'm shorter than you expected, I know.

CAITLIN: No, I've always thought of you as short.

CHAD: Where is Dino and Helen?

(DINO enters)

Dino!

DINO: Hey Chad. Caitlin.

(DINO probably embraces Bonnie)

CHAD: I'll have you all sit here.

(arranging themselves on chairs)

And I believe we're waiting on one more.

(Enter HELEN. BONNIE and CAITLIN jump up out of chairs. DINO remains seated)

CAITLIN:/BONNIE: Helen!

(THEY extend greetings)

HELEN: Hi everybody! Hi Chad!

CHAD: Great to see you, Helen. Now if you will all take your seats.

(THEY all sit.)

(HELEN waves to Dino, holding up two fingers. DINO waves back, also holding up two fingers. BONNIE notices this odd greeting between them but before she can say anything....)

Let's begin. Rolling.

It has been about three weeks since the complete failure of the Biosphere mission. We are here with the four Biospherians to talk about their final days in the glass dome and catch up with their plans for the future.

CAITLIN: It wasn't a complete failure.

CHAD: You didn't finish what you set out to do.

CAITLIN: And what do you think we set out to do?

CHAD: To live in a self-sustaining closed environment for two years. Nothing in, nothing out.

CAITLIN: So, you are saying "The primary goal was for Biosphere to be sealed for two years. If this goal was not met, the experiment was a failure." Correct?

CHAD: Yes.

CAITLIN: This pass/fail criterion is completely foreign to science, where success is measured by whether one learns from an experiment.

CHAD: Fair enough. Dino, what did we learn from Biosphere?

DINO: That if you are hungry enough, you will eat the whole peanut, shell and all.

HELEN: I swear, last week I started to eat the peanut whole, I then remembered "I don't have to do this anymore." It was an epiphany.

BONNIE: We ate so many peanuts inside.

CAITLIN: And sweet potatoes.

HELEN: And carrots.

DINO: Our skin was turning orange from all the beta-carotene.

BONNIE: I will never eat another sweet potato for the rest of my life.

CHAD: What else did we learn from Biosphere?

BONNIE: Well, Helen wrote a beautiful press release on the interaction between concrete and CO₂.

CHAD: I get all your press releases, I don't remember that one.

HELEN: There's a reason for that.

CHAD: What's the reason?

HELEN: Mission control.

CHAD: Management suppressed your press release?

HELEN: Yes.

CHAD: Why?

HELEN: We were using the discovery of the absorption of CO₂ by the concrete to justify pumping in more oxygen.

BONNIE: I have severe migraines and the reduced oxygen was making my migraines unbearable.

CAITLIN: But Alan knew that as soon as we pumped in more oxygen, then people like you in the media would jump all over it and say the entire enterprise was a failure.

DINO: Failure was not okay with Alan.

CAITLIN: But just because the media decrees that Biosphere is a failure in their 60 second segment, doesn't mean it is a failure.

CHAD: The media objected to management's deceptions.

CAITLIN: He was deceptive because honesty about any problems with Biosphere was viewed as failure by the media.

CHAD: Had he said that you needed to pump in more oxygen and explained the reason, it would have been fine.

CAITLIN: I don't believe that.

CHAD: Let's move on to the final days of Biosphere.

DINO: Bonnie left, and the rest of us stayed a few more days and then decided as a group to walk out of the airlock.

CHAD: So, now what happens to you all?

DINO: Bonnie is going to present a paper at the Rio Earth Summit on corals. I am going to be consulting on improvements to Biosphere, based on our experience.

CHAD: What about Alan?

DINO: The entire management team was fired by the investors.

CHAD: Wow. Okay. Helen, how about you?

HELEN: Not sure. But I am ready for a real adventure.

CHAD: Biosphere wasn't a real adventure?

HELEN: No. It was monotonous. I thought there would be more excitement in there. Starving and suffocating to death is interesting. But it isn't exciting. I am ready for excitement.

CHAD: Caitlin?

CAITLIN: I don't know. I thought I had two years of my life all planned out. Now. I don't know.

CHAD: Well, we wish you all the best of luck in the future and we look forward to catching up with you all again real soon.

And cut.

(long pause)

CAITLIN: You aren't going to be "catching up with us again real soon." You're going to move on to the next big thing. Biosphere is already a fading memory.

CHAD: We intend to follow the Rio Earth Summit, maybe even send a camera crew down there. But for now, I got to pack up here so I can move on to the next big thing.

CAITLIN: Well, Chad. I despise you but we all appreciate the interest you have shown in Biosphere.

CHAD: Thank you.

HELEN: Hey. Do you think we could all get together at my apartment next week? I can barbeque steaks.

DINO: That sounds awesome. Let's do it!

Bonnie, I will see you back home. Bye everyone.

(exit DINO)

BONNIE/CAITLIN/HELEN Bye.

BONNIE: Well, Caitlin, shall we finish our cups of coffee?

CAITLIN: Sure. See you next week Helen.

HELEN: Bye.

(BONNIE and CAITLIN move to the "café" area, leaving CHAD and HELEN)

HELEN: So, Caitlin tells me you don't surf.

CHAD: No, I don't.

HELEN: Oh well. Bye Chad.

(HELEN begins to exit)

CHAD: But I've been thinking about taking lessons.

HELEN: (turning back) Me too.

(Lights fade on Helen and Chad)

SCENE 14

Lights up on Bonnie and Caitlin in Café area.
Bonnie and Caitlin are lost in thought. Pause.

BONNIE: So.

CAITLIN: Yeah. (pause) Is that how it all ends?

BONNIE: In the New Yorker, they have these book reviews. The important reviews are followed by these thumbnail reviews labelled "Briefly Noted."

CAITLIN: Yep. Briefly Noted.

BONNIE: Chad's editor will give us 60 seconds max.

CAITLIN: Briefly Noted.

BONNIE: Chad asked what we had learned from Biosphere. For me, what is most profound isn't something that I learned in my brain, but rather, something I learned in my soul.

CAITLIN: (?)

BONNIE: We did not live inside of Biosphere. We were part of Biosphere. The Biosphere owned our molecules.

Whatever we sprayed on a plant was soon part of our bodies. What Helen peed on Monday was in my food by Friday.

CAITLIN: I felt so connected to Biosphere.

BONNIE: Yeah.

CAITLIN: And it's the same out here, we just don't know it. (pause) I have never felt so scared. For the planet.

BONNIE: But we can do something.

CAITLIN: What can we possibly do?

BONNIE: Would you like to help me in the lab?

CAITLIN: With the corals?

BONNIE: Yes.

CAITLIN: Absolutely.

BONNIE: And. How is your Portuguese?

CAITLIN: Rio? Really!

BONNIE: I can't do this by myself and I never want to see Alan ever again.

CAITLIN: I'm fluent in Portuguese!

BONNIE: Really?

CAITLIN: No! Can I hug you now?

BONNIE: I'm not there yet.

CAITLIN: I understand. So, Nature Magazine?

BONNIE: Let's write it together. But I am lead author.

CAITLIN: I really need to hug you now or I'm going to pee my pants.

BONNIE: Sorry. This article needs to be a home run. Our presentation in Rio has got to be a grand slam.

CAITLIN: I know. For your career.

BONNIE: No. For the planet. This is serious. The health of corals is basic to the health of the earth.

CAITLIN: This is so exciting. But I can't afford to fly to Rio and stay at a hotel.

BONNIE: Yeah. Neither can I.

CAITLIN: So....

BONNIE: Alan is paying for both of us to go to Rio.

CAITLIN: Alan?

BONNIE: I know, right?

CAITLIN: And what does he expect in return?

BONNIE: Nothing. Believe me, I made it clear that he gets nothing but a clear conscience in return.

CAITLIN: I can't believe this is happening! The Earth Summit means that nations are finally taking climate change seriously.

BONNIE: I agree.

CAITLIN: I have questioned the Biosphere project. I have questioned why I have dedicated years of my life to this project. But this. This makes it all worth it.

BONNIE: I am so optimistic about all these nations coming together at the Earth Summit.

CAITLIN: I have such hope for the future!

BONNIE: Me too!

(BONNIE hugs CAITLIN)

END OF PLAY