**Area 1- Swamp**

* **Rangers waking up from crash**
  + Ranger: “Ooh...Ugh, what happened?”
  + ROGER: “Error, Error, system overload. Proceeding to Reboot…... Reboot Complete!”
  + ROGER: “Designated Ranger, the ships gravity engine malfunctioned. While I run diagnostics, make sure you can move efficiently. We have lots to do!”
* **Radar goes missing**
  + ROGER: “DIAGNOSTICS COMPLETE. I have bad news Ranger: The ship is totally wrecked, and the radar is…”
  + Ranger: “Broken? No problem, I can fix that!”
  + ROGER: “Don’t interrupt me! It’s not broken, it’s completely missing. Sir, this is not good.”
  + Ranger: “Missing? Unless it fell out of the ship during the crash, it must have been stolen...Check the CCTV footage, quickly.”
  + ROGER: “I tried doing that during my diagnostics, but I couldn’t access it. It seems like somebody is messing with my system in the main bay. Let me open the door and you go check it out.”
* We meet Daria (Maybe there is a shadow of hers)
  + Ranger: “ROGER, what is that thing over there?”
  + Daria: “HEY! I am not a thing; I am a Daran!”
  + Ranger: “Well whatever you are, you must be the one messing with my ship!”
  + Daria: “Uh Oh...” (runs out of ship)
  + Ranger: “HEY! COME BACK HERE!”

**Ranger moves outside of the ship into the swamp area where Daria is standing, and transitions into minigame when interacting with Daria.**

* **Minigame Questions:**

1. What’s a radar?
   1. A radar detects surrounding objects using radio waves.
   2. A radar detects recently made cherry pie
   3. A radar gets your favorite television shows
   4. A radar detects surrounding objects using magic
2. What does RADAR stand for?
   1. Radio Detection and Ranging.
   2. Raspberry Danish and Ravioli
   3. Rectangle Diamond and Rombas
   4. Radio Destroyer and Reviver
3. How does a radar detect things?
   1. The radar transmits a pulse wave – usually shortwave microwaves – at a certain time
   2. Asks politely
   3. Studies very hard
   4. Uses the MBSE model
4. What does the pulse wave do?
   1. The pulse travels through a medium (air, vacuum of space) & bounces off an object
   2. Finishes your math homework
   3. The pulse travels through Jello and bounces off a spoon
   4. Makes you act on impulse
5. Why does it bounce off an object?
   1. Once it bounces off the object, it comes back towards the radar.
   2. It wants to be a gymnast
   3. It wants to see how high it can jump
   4. It’s coated in bouncy juice
6. How does the radar know where the object is?
   1. It finds the range by measuring the time the pulse was sent & when the pulse returns & divides it by 2
   2. It looks at it with binoculars
   3. It tries its best
   4. It communicates with other radars within a 300-mile radius
7. What if the object is moving?
   1. We can determine the direction & speed the object is moving by looking at various positions over time
   2. It puts pedal to the metal
   3. It says, “SLOW DOWN!”
   4. It does not detect the object

* **Ranger catches up to Daria after the minigame**
  + Daria: “That sounds awesome, what does a Radar look like?”
  + Ranger: “What are you talking about, don’t you not have my radar? What were you doing on my ship?”
  + Daria: “I heard an explosion and wanted to see what was going on. When I got here, I saw your friends running off, so I assumed everyone was gone.”
  + Ranger: “Friends? Unless ROGER grew some legs and ran off, no one else was on the ship but us two.”
  + Daria: “What about the Scein? And the Trolum? Or the Yappo? The Tendra? And the...what were they called? Oh yeah, the Lagna!”
  + Ranger: “Sheiza, the aliens of this planet must have gotten on board while ROGER and I were out cold...”
  + ROGER: “Ranger, while you were playing catch up with your new friend, I got access to the CCTV footage. You should come take a look at this; I will be waiting in the Comms room.”
* **Ranger is at the Comms Room**
  + ROGER: “According to the video, it looks like there were 5 different aliens that took parts of the Radar.”
  + Ranger: “Ok ROGER, is there any way you can track them down?”
  + ROGER: “Sadly I cannot. Due to my reboot, most of my functionality was wiped clean.”
  + Ranger: “Dango! First my ship crashes, then my radar is stolen, and now ROGER? How am I going to get this done?”
  + Daria: “Perhaps I can help!” (Daria enters).
  + Ranger: “Oh yeah? Why would you help us! I don’t even know your name...”
  + Daria: “The name is Daria! I am a Daran, the native species of Hertzich! I had so much fun with you earlier, I thought I would see if you wanted to play more! Then I overheard your conversation, and it seems like you could use some help.”
  + Ranger: “And why should I trust you?”
  + Daria: “Do you have any other options?”
  + Ranger: “Dango, you gotta point there...Alright, and how exactly can you help?”
  + Daria: “I’ve lived here all my life and I know this planet like the back of my paw. The big city, Yaplisdapolis, would have somewhere to fix your ship. I can show you how to get there!”
  + Ranger: “The city? I saw that earlier when we were falling into the atmosphere, I don’t think it’s too far...but what about the missing radar? I would be flying blind in deep space without it!”
  + Daria: “Well, all the nice people I saw earlier had pieces of something, I bet that was your missing radar! I know a path that would lead into each major village of the other species on the planet, with the *biiiiiig* city at the end!”
  + Ranger: “Well, it seems we really could use your help then...Ok hotshot, where to first?”
  + Daria: “The closest village would be in the Plains of Trolonc. That’s where the Trolums live. I bet we can find a part of your radar there!”
  + Ranger: “Sounds good! ROGER, will you be ok on the ship?”
  + ROGER: “Don’t worry Ranger, I have a piece of me in your suit, it will be like I never left your side. Gotta make sure you stay on track.”
  + Daria: “This will be so much fun!”

Daria walks into Ranger, with a “DARIA JOINED THE PARTY” message appearing, then screen fades to black.

**Review Area 1**

1. What does the antenna do?
   1. Sends and receives waves.
   2. Display Data.
   3. Provides power for the unit.
2. What would a radar be used for?
   1. Send messages to other radars.
   2. Detecting, locating, and tracking objects.
   3. Translate different languages.
3. What kind of waves does the radar use?
   1. Hand waves
   2. Ocean waves
   3. Microwaves

**Area 2 – Trolonc**

* **Reaching the town of Trolonc and talking to the Natives**
  + Daria: “Here we are! This is where the Trolums live.”
  + ROGER: “Let’s ask around for any information the locals might have.”
* ROGER walks around and talks to NPC’S
  + Daria: “Excuse me, see anything unusual recently?”
  + NPC 1: “I haven't seen anything. I was too busy mopping my doorway.”
  + Ranger: “Hey, see anything strange around?”
  + NPC 2: “I heard a loud bang earlier; I think it was just the neighbors”
  + Daria: “Sorry to bother you, but have you seen anyone with a weird device?”
  + NPC 3: “Well, Travin just came by saying that they found this weird Geode while scavenging. It was a square rock with these weird items on the right and a transparent rock on the left.”
  + Ranger: “That must be the Control Unit! Where is Travin right now?”
  + NPC 3: “He runs a shop next door. It's hard to miss.”
* **Going into Travin's shop.**
  + Travin: “Newcomers...Welcome in! I am Travin and this is my shop.”
  + Daria: **“**Hey there sir, we heard from somebody that you found some cool geode recently?”
  + Travin: “OH, you're talking about my Geode. It looks beautiful, I would show you, but it's not for sale.”
  + Ranger: “Actually, that geode you're talking about is a control unit for my radar, and its mine!”
* MINIGAME: every time you time the meter right; ROGER answers a question.
  + Travin: “What are you talking about? I’m not going to give up this beautiful Geode...what’s a control unit?”
  + (RIGHT ANSWER) ROGER: “It controls the radars settings, its necessary to make sure the radar is functioning properly”
  + (WRONG ANSWER) ROGER: “It... well it...oh shoot, I forgot!”
  + Travin: “Sure, it does, and how does it do that?”
  + (RIGHT ANSWER) ROGER: “It does it with PT, or Transmit Power, which is the Average Transmit in Watts.”
  + (WRONG ANSWER) ROGER: “Magic! No, that can’t be it...”
  + Travin: “What do you mean by Average?”
  + (RIGHT ANSWER) ROGER: “Depending on the size of the Radar, the power can range from milliwatts to even megawatts”
  + (WRONG ANSWER) ROGER: “Take all the numbers and add them and then...wait that's not it...”
  + Travin: “You said it's for your radar, how does it work with that?”
  + (RIGHT ANSWER) ROGER: “The signal a radar receives is typically smaller than what is transmitted because of scattering and attenuation losses as waves travel through its medium.”
  + (WRONG ANSWER) ROGER: “By writing it a love letter! That’s not right...”
  + Travin: “Wow! You seem to know a lot about this Geo... sorry, Control Unit. Here, since you said it was yours.”
* **Leaving the store after the shop**
  + ROGER: “Alright! One part down!”
  + Ranger: “A couple more to go. Alright kid, where to next?”
  + Daria: “Well, I hope you're good at climbing.”
  + Ranger: “What do you mean?”
  + Daria: “We are about to climb Mt. Tenanan!”
  + Ranger: “Of course we are.”

**Review area 2**

1. What is a Control Unit?
   1. It refers to the electromagnetic wave that relates to the energy of the radar
   2. It stores information on the radar
   3. It controls the radars settings.
2. What is the PT?
   1. Transmit Power or the Average Transmit in Watts.
   2. Is the speed at which the wave moves through a given medium
   3. It refers to the electromagnetic wave that relates to the energy of said wave
3. The signal a radar receives is typically smaller than what is transmitted. Why?
   1. Because of the noise bandwidth of the receiver
   2. Because of the wave functions traveling through the air
   3. Because of scattering and attenuation losses as waves travel through its medium.

**Area 3 – Mt. Tenanan**

* **Reaching a resting area near the mountain**
  + Daria: “Hey grumps, I’m getting a little tired.”
  + Ranger: “Who are you calling Grumps?”
  + Daria: “You Grumps! Since you act like a bunch of Grumps!”
  + ROGER: “According to your wave patterns sir, she is correct.”
  + Ranger: “I didn't ask you ROGER.”
  + Daria: “There is a rest stop nearby, we can take a little breather up there. There are typically a few people up there, they might know something about the next part!”
  + Ranger: “Sounds good to me”
  + NPC 1: “Welcome to the Resting area before the peak of Mt. Tenanan! Home of the Tendra. I sadly do have some bad news though, due to uncertain circumstances, the gateway to the peak is closed.”
  + Ranger: “what do you mean closed?”
  + NPC 1: “There has been an incident that includes our Antenna. It has been down for a while. We have a group of repair men trying to fix the Antenna as we speak.”
  + Ranger: “Did you say Antenna? Did one of them bring in a part to try and fix it?
  + NPC 1: “As a matter of fact, one of them did, they thought it would be the ‘perfect piece.’ They said they found it in some kind of ship wreckage.”
  + ROGER: “That must be our Antenna.”
  + Ranger: “Hey, I'm a technician myself, do you mind if I help?”
  + NPC 1: “Any help is major cool! I will give you passage.”
* **Reaching the top of Mt. Tenanan**
  + ROGER: “Looks like the gatekeeper was right; their antenna is having major issues. Try to see if you can help them out!”

START MINI GAME

* **After Finishing the Minigame**
  + Techra: “Thank you so much for helping us fix the Antenna!”
  + Ranger: “No problem.”
  + Daria: “Hey Ranger, that looks to be your Antenna piece!”
  + Ranger: “Yeah, it is. Since you don't need it anymore, you mind if I take my antenna back?”
  + Techra: “Oh, this little thing? One of the guys found it near a wreckage and thought it would work, obviously, he was wrong.”
  + ROGER: “Yeah, you folks have a different type of Antenna up, ours is a Dipole Antenna, while yours is parabolic.”
  + Ranger: “I am just happy I got the ship’s Antenna back! What's next Daria?”
  + Daria: “Well, we gotta get down the mountain.”
  + Techra: “Actually, to show our gratitude, let us help you glide down the mountain! We will be waiting at the end right here.”
* **When they go to the Tendra's for flying:**
  + Daria: “Wheeeeeeeeeeeeeee!”

**Review area 3**

1. What equation is this for? s
   1. Gamma
   2. Gain
   3. Growth
2. What happens when gain is too high??
   1. The shape becomes fixated in a position.
   2. The shape is equaled out
   3. The shape becomes more spaced out
3. What happens when gain is too high??
   1. The shape becomes fixated in a position.
   2. The shape is equaled out
   3. The shape becomes more spaced out

**Area 4 - Deserts of Sceivnarter**

* **When they enter the area**
  + Daria: “That was so fun!”
  + Ranger: “Not going to lie, it was a little fun. So where are we now exactly?”
  + Daria: “This right here is the Deserts of Sceivnarter. Home of the Scein. On the footage, there was a Scein that took a part. There's an oasis town nearby that should have some information on the part.”
  + Ranger: “Alright, Lead the way!”
* **The Town**
  + Ranger: “Alright, you know the drill. Let's talk to the Natives around here for information.”
  + NPC 1: “Make sure you watch your amplitude!”
  + Daria: “What's an amplitude?”
  + Ranger: “It refers to the electromagnetic wave that relates to the energy of said wave”
  + NPC 1: “Uh…sure”
  + NPC 2: “Keeping track of your wavelength could save your life!”
  + Daria: “What's a wavelength?”
  + Ranger: “It’s the distance between two consecutive points on a wave that are in phase with each other”
  + NPC 2: “Huh?’
  + NPC 3: ”The frequency at which you move is vital…”
  + Daria: “What's frequency?”
  + Ranger: “The frequency is the number of cycles a wave in one second”
  + NPC 3: “That’s not what I was talking about!”
  + NPC 4: “Stop for a period and rest…”
  + Daria: “Period, like at the end of a sentence?”
  + Ranger: “Period is the time it takes for the wave to go through one cycle”
  + NPC 4: “Sounds complicated…”
  + NPC 5: “I move with the velocity of jets!”
  + Daria: “Velo-city? Where is that?”
  + Ranger: “It's not a place, It’s the speed at which the wave moves through a given medium”
  + NPC 5: “I guess???”
  + NPC 6: “Did you know that in a perfect vacuum, the speed of any electromagnetic wave is equal to the speed of light, c=3x10^8 ms? This only can happen in a perfect vacuum, its slower anywhere else!”
  + Daria: “What?”
  + Ranger: “I... got nothing else to add here, you know your stuff!”
  + NPC 6: “No Problem?”
  + Selco: “If you need locks, I’m your guy! Just made this new safe with some extraterrsital ship parts!”
  + ROGER: “Thats our transceiver!”
  + Selco: “Oh yeah? Prove it! If you can unlock my new safe, then I'll give it to you!”
  + Ranger: “Guess we don’t have a choice, hand it over!”
* **After unlocking the safe**
  + Selco: “You guys are master lockpickers! Here is your transceiver thingy back, I already copied down the design anyway.”
  + Ranger: "Thanks!”
  + Daria: “Alright, we got another part! Now to the next area!”
  + Ranger: “I hope we are getting close...”
  + Daria: “And I hope you can swim!”

**Review area 4**

1. What Three Properties affect waves?
   1. Amplitude, Frequency, and Wavelength
   2. Velocity, Impulse, and Flash
   3. Force, Light, and Amplitude
2. What is Velocity?
   1. The speed at which the wave moves through a given medium
   2. the time it takes for the wave to go through one cycle
   3. It’s the distance between two consecutive points on a wave.
3. How do electromagnetic waves differ from other kinds of waves?
   1. They have frquency, amplitude, and a wavelength
   2. They are completely similar to other kinds of waves
   3. They don’t need a material medium to travel.

**Area 5 – The Lagnis Ocean**

* **The Gang reaches the beach**
  + Daria: “Here we are!”
  + Ranger: “What do you mean? All I see is ocean.”
  + Daria: “It's because there is an Ocean that is between the city and the Desert. We have one more place to go to before then... and it's inside the water.”
  + Ranger: “Inside the water?”
  + Daria: “Yes, there was a Lagnai in the footage, and they live in the Ocean. I have no idea how we are supposed to get to the underwater city...I was hoping you would have an idea!”
  + ROGER: “Don’t worry, Ranger's suit has environmental adapting tech and can easily allow Ranger and anyone in the suit to survive underwater.”
  + Daria: “What about me? Last time I checked I can’t breathe underwater.”
  + ROGER: “There should be enough space for you to fit in the suit.”
  + Ranger: Wait, I don’t know about all that!”
  + Daria: “It seems to be the only way. Make room Ranger, I'm coming in!”
  + Ranger: “Cramped...Ok then, to the underwater city!”
* **Entering the Ocean**
  + Ranger: "Stop squirming so much!”
  + Daria: “Sorry, I’m not used to being in such a tight space.”
  + Ranger: “My suit isn't exactly made to fit more than one creature.”
  + ROGER: “Sir, there seems to be a radio signal nearby.”
  + Ranger: “A radio signal underwater? Try to tune into the broadcast, let’s see what it is.”
  + GoGo Babby: “Welcome to the Processed Signal SGNL! Where we talk about Signal Processors all night long.”
  + Ranger: “An entire radio show about Signal Processors? Thats new.”
  + GoGo Babby: “Welcome to everyone’s favorite segment, Qu-Qu-Qu-Question time! Where we’ll be answering questions coming in. It looks like we are already getting a caller! Who are we speaking to?”
  + Daria: “Hi, my name is Daria, and I am currently coming from my friend, Rangers, helmet.”
  + Ranger: “Wait, how are you-?”
  + GoGo Babby: “Welcome Daria! What’s your question?”
  + Daria: “What is a Signal Processor?”
  + GoGo Babby: “A signal processor takes a signal, a wave function traveling through the air, and ingests & interprets it.”
  + Daria: “What is it made of?”
  + GoGo Babby: “Program and Data memory, which stores information. A compute Engine, which preforms the math processing. And an input and output, which connects the device to the outside of the signal Processor.”
  + Daria: "Neat! I can’t think of any more questions...”
  + GoGo Babby: “Well before you go, we have a little surprise for you: You are our 1000th caller! We have a prize waiting for you, and it rhymes with “Pringle Successor”. Just come down to the station to get your prize!”
  + ROGER: “That must be our Signal Processor. Come on guys, let's go to the station!”
* **Reaching the station**
  + GoGo Babby: “Wow, I thought you were kidding about the helmet thing. You must be Daria.”
  + Daria: “Yeah, I am, I am here to get my Pringle Successor.”
  + GoGo Babby: “Well, before you do, you have a couple things to do to get your prize!”
  + Ranger: “Bring it on!”
* **Completing the Minigame**
  + GoGo Babby: “Congratulations guys! Well, here is your Signal Processor. Before you leave, you can always come back for more challenges and prizes at SGNL.”
  + Ranger: “Thanks!”
  + ROGER: “All we need now is the Display, then we have all our parts for our Radar.”
  + Daria: “Hey, since we are here, can you direct us to which way the city is?”
  + GoGo Babby: “Oh sure, the city's entrance should be ahead.”
  + Ranger: “About time we got to that city. Let's go!”

**Review area 5**

1. What connects the device to the Signal Processor?
   1. The Compute Engine
   2. The Input and Output
   3. The Radio Signal
2. What does the Signal Processor do?
   1. Takes a signal and Interprets it
   2. Sends the signal out to other Radars
   3. Produces the Signal
3. What is the Signal Processor made of?
   1. The Compute Engine, The Input and Output, and the Radio Signal
   2. Program and Data Memory, The Compute Engine, and the Input and Output
   3. Program and Data Memory, the Radio Signal, and The Input and Output

**Area 6 – Yaplisdapolis**

* **Entering the City**
  + ROGER: “This city is beautiful!”
  + Ranger: “And *really* bright. Wow, there are a lot of screens.”
  + Daria: “Welcome to Yaplisdapolis, the city of Screens & Dreams.”
  + Ranger: “It looks like the only place open right now is that, Cafe. Let's head there.”
* **The Cafe**
  + NPC 1: “That Barista is gorgeous! That new necklace really puts the piece together.”
  + NPC 2: “The coffee here is to die for!”
  + NPC (With Sunglasses?????) 3: “Yaplisdapolis and the Yappo sure love their screens. It's too bright for me.”
* **Talking to Yosie**
  + Yosie: “Welcome to the 24 Hour Cafe! My name is Yosie. What can I get for you?”
  + Daria: “Your necklace! I mean, it’s beautiful!”
  + Yosie, visibly and audibly nervous: “Oh, well... thank you very much.” (Nervous laughter)
  + Ranger, condescending: “Yes, it’s lovely, but don’t you think it... clashes with your feathers a bit?”
  + Daria, excited: “Why, yes! Very clashy. Where did you get that weird old thing?”
  + Yosie: “None of your business! how dare you...!”
  + Ranger: “In fact, I bet I can wear it even better than you can...”
  + The patrons of the cafe: “ca-caw! Ca-caw!”
  + Yosie: “You’re challenging me...!?”
* **After the Minigame & Quiz**
  + Yosie: “Wow, you were made for this!”
  + Ranger: “Thank you, and I have to admit I had a lot of fun.”
  + Daria: “It's nice seeing Ranger like this, I never thought Mr. Grumps would be so cool!”
  + ROGER: “We got all the parts for our Radar sir. It looks like we can get out of here.”
  + Ranger: “That's going to take a while, isn't it?”
  + Daria: “Actually, no! The city is next to the Swamp where your ship is. We should be there in a Jiffy!”
  + Ranger: “Lead the way, Daria!”

**Review area 6**

1. What is SNR (Signal to Noise Ratio)?
   1. The Measure of the data (signal) compared to the receiver antenna power(noise) received by the antenna.
   2. The Measure of the antenna (signal) compared to the amount of data (noise) received by the receiver.
   3. The Measure of the receiver antenna power (signal) compared to the amount of data (noise) received by the antenna.
2. How is SNR measured?
   1. Decibels
   2. Megawatts
   3. Milliwatts
3. What equation is used for SNR?
   1. k \* T\_s \* B\_n
   2. P\_r / N

**The Finale:**

* **Reaching the ship**
  + Ranger: "Now that we have all the pieces, I can put the radar back together! Time to show y'all how a radar technician does it!
  + Daria: “Hey grumps, I would like to say thanks for letting me help you through this journey. You’ve inspired me, I would love to be a ranger like you!”
  + Ranger: “Well Daria, we would be honored to have you! Although typically you have to be an adult...”
  + Daria: “I'm 34 Ranger.”
  + Ranger: “Really? Well, you can come with us then and we can get you to a recruiter.”
* Fixes radar
  + Ranger: “That should do it.”
  + ROGER: “Ranger? What's going on- WHAT HAPPENED!”
  + Ranger: “Oh yeah ROGER, you had to be rebooted because of the crash. The radar being rebuilt must've brought everything back.”
  + ROGER: “Sheesh, seems like I missed a lot! I’ll get started on ship repairs! While I get that done, it seems you have some visitors outside.”

Ranger goes outside

* + Yosie: “Whoooaaaaaaaa. That ship is a beaut!”
  + Ranger: “Hey everyone, what are you all doing here?”
  + GoGo Babby: “Well, we heard you were leaving soon, and Daria invited us over to see the ship.”
  + Selco: “I have to say goodbye to my arch-rival after all.”
  + Worker: “We also wanted to thank you for everything you did for us!”
  + Travin: “And here I thought the Control Unit was complex. That ship must be something else.”
  + Ranger: “Since everyone is here, I can give you all a quick explanation about the Radar.”
  + Daria: “It could be good information for when I join the Ranger Corps. Please do!”

Review

* + Ranger: “Looks like everything is good here. ROGER, how's it looking.”
  + ROGER: “Everything is up and running sir. I have to say, it's been a while since I have seen you so relaxed. This adventure must've helped you out a lot.”
  + Ranger: “As much as I love this place, work doesn't stop for anyone. ROGER, set a route back to IUI!”
  + ROGER: “Affirmative!"
  + Daria: “Let's goooo!”

END