**Day 2 Activities**

***Schedule:*** *professors in the room are responsible for keeping track of time and giving students a heads up when we will be ending/switching activities.*

15 min – Icebreaker and coloring page

15 min – Introduction slides and discussion of last weeks activity

5 min – Today’s activity

5 min- Divide into groups

30 min- ***Activity #1***

Repeating mining/separating/polymerizing activity from Day 1

3 minutes to mine per round and exchange rate for paperclips 🡪 play-doh

Highlighting depletion of oil overtime

10 min- ***Group Discussion***

We will run out of plastics due to limited resources

Video

10 min – ***Activity #2***

Separating mushed together dinosaurs to highlight sorting plastic during recycling

10 min- ***Activity #3***

Make dinosaurs out of the mixed play-doh pieces to highlight

Till the end- ***Group Discussion***

Reduce/Reuse/Recycle

**Activity #1** 30min

***1. Mining***

* Have the kids use ONE HAND – non-dominant to mine for paperclips and bolts
* Have each kid have their own pile
* After **3 minutes** STOP the mining
  + ***IF…*** the kids are moving too fast, you can instruct them to take turns reaching in
  + You can ask tell them to look for specific colors
  + Or you can have them try reaching in and feeling around for paperclips without looking.
  + ***It is your responsibility to make sure that they do not mine ALL the paperclips in the first round. We really want them to have enough paperclips for the 2nd and 3rd rounds.***
* Combine all the kids mined material
* **Weigh and Record**
* Write your groups’ total number of paperclips on the board in the classroom
* After all the groups have written up their total number of paperclips, **ADD** the total in the classroom

***2. Separation***

* Have the kids separate their pile into bolts and paperclips
* **Weigh and Record** the total weight of paperclips and the number
* Write your groups’ total number of paperclips on the board in the classroom
* After all the groups have written up their total number of paperclips, **ADD** the total in the classroom

***3. Polymerization***

* Have the kids link **SAME COLOR** paper clips together
* They can make the chains as long or short as they want but have them set them aside

***Introduce exchange rate-*** for every paperclip, they get 2 grams of play-doh

(*or if your group likes weighing… for every gram, give them 2 grams of play-doh)*

* Multiply to get how much play-doh we give them
* Give the kids **3 colors of play-doh** to make the dinosaurs

***4. Molding***

* Have the kids make as many dinosaurs as they can using the molds and given play-doh
* **Add** the total number of dinosaurs in the group and **Record,** then write it up on the board
* **Record** the total number of dinosaurs in the classroom
* Put the dinosaurs in a weigh boat labeled **TRASH**
* *Tell the kids now that they have made and used their plastic materials, they tossed them in the trash so they will just go to a landfill.*
* *ASK them whether they think we should have thrown them in the trash.*
* *MOTIVATE recycling!*
* Take the dinosaurs away after each round and set them aside

***Repeat steps 1-4 THREE times***

***Purpose:***

* The second and third time they do the experiment, they will have a smaller amount of paperclips each time
* Then they will receive less play-doh
* Therefore they will make less dinosaurs

***Key Takeaways:***

* Over time we will run out of oil if we keep taking it out of the ground
* If we use plastics and throw them away that is wasteful
* The plastics will pile up in landfills which isn’t good for the environment, animals, and humans

***If your group runs out of paperclips for round 3 :***

* You can discuss with them why renewable resources are important.
  + Renewable resources are resources that will never run out.
  + What are some renewable resources? (wind, solar, hydropower, corn)
  + Is oil a renewable resource? (no.)
* You can also have them work on their coloring sheets

­­**Group Discussion** 10 min

As a group discuss the trends observed…

***Questions to ask:***

* What happens each time we mine in our buckets?
* What will happen if we were to keep mining?
* How many dinosaurs did we make the first time vs the second time?
* Do you think we should have thrown the dinosaurs in the trash?

***Key takeaway:***

* It is more and more difficult to make objects overtime because we run out of crude oil
* We will run out of plastics due to limited resources

***Re-Introduce the concept of recycling***- show video after discussion

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­­**Activity #2:** 10 min

***Procedure***

* ***SOFTLY*** mush a few DIFFERENT COLORED dinosaurs into a ball for each student
  + You want to make it hard for them to separate the colors **BUT**  not impossible
* Ask them to carefully separate the balls into the different colors
* The parts that are too mixed together can be put aside
* Have the kids make dinosaurs out of the PURE play doh
* **Record** the total number in your group
* **Record** the total number in the class

***Purpose:***

* Show the kids that it is hard to separate plastics (different colors)
  + You can really mush some colored play doh together to make your point if separating doesn’t seem easy to them
* You won’t make as many dinosaurs as when the play doh wasn’t mixed

***Key Takeaways:***

* Separating platic is important
* It is hard to make sure that you get all the colors sepatated

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**Activity #3** 10 min

***Procedure***

* Make dinosaurs out of the pieces of play doh that are too mixed to separate
* **Record** the total number in your group
* **Record** the total number in the class
* Reiterate that different kinds of plastics will similarly not mix together so there will be clear differenced from one plastic to another

***Key Takeaways:***

* Plastics do not mix
* Products made out of “mixed” colors/plastic are not perfect

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**Group discussion** till the end…

* Introduce the concept of reduce/reuse/recycle
* Video on Reduce reuse recycle
* Wrap-up