BC SRC 2020: Explore Our Universe!
Program (Ages 5-8), Theme 3: What If…? (The Future, Science Fiction, Imaginations)
Prepared By: Kelly Savage, Vancouver Public Library

WELCOME & INTRODUCTION [5 min]

Welcome everyone. Tell everyone how you have planned to do the activities (Solo, pairs, groups etc.)
Housekeeping details. Cover guidelines for behaviour. Introduce the theme (see below).

What If…We Went to Live in the Stars?

Not all planets can support life. Some planets are too close to a star and are too hot. Some planets are too far
away from a star, and are too cold. Some planets are too large. Some are too small. The only planet that we
know has the perfect conditions of life, is our Home. Planet Earth. But Scientists are always looking for the
Goldilocks Planet. A Goldilocks Planet is a planet that is not too small, not too big, not too hot, and not too
cold. Science Fiction has always explored what life would be like if humans moved beyond the earth and into
the stars. What would extra-terrestrial homes look like? What would people eat? Would we live among extra-
terrestrial life? How would that work? In this program we are going to use our imaginations to explore what life
would be like on another planet.

ICEBREAKER (as kids arrive) [5 min]

Choose your Sci-Fi Name

Finding a possible home amongst the stars is going to take a long time. Right now, scientists don’t actually
know of any planets that would be a good home for people. So the reality is that an extraterrestrial home is
more the stuff of science fiction. In science fiction, characters often have really cool names. Roll the two dice
to reveal your Sci-Fi Name (See template below)
[Optional: Have the kids fill out and decorate name tags with their Sci-Fi Name]

Materials:
- 2 Printed templates (coloured cardstock preferable), cut out and made into cubes.
- Felt markers
- Name tags

BOOKTALK OR STORY [5 – 10 min]

Just Right: Searching for the Goldilocks Planet by Curtis Manley
Or see Booklist Below

ACTIVITY 1 [5 - 10 min]

The Human Machine

Science Fiction is FULL of robots and machines. If we are going to find an extra-terrestrial home, it is likely
that we will need to make a whole bunch of new machines to support and help in our adventures. Ask for a
few examples of robots or machines, either in Sci-Fi or real life.

One person starts a mechanical movement. Another person “attaches” themselves to the machine and adds
an additional, different movement. Continue until everyone in the groups is included and creating a movement.
Remember, movements can be as small as a winking eye. This activity will take place without anyone actually
touching anyone else. If you are not comfortable being in close proximity to others you can position yourself as
far away from the rest of the group as you would like. If you find yourself in a position you don’t like and want
to change position – you are welcome to move. So, for example, if Jane is making a movement and I come up
right next to her and she is uncomfortable for whatever reason, then she is free to move to a different part of
the room and make a different movement. Let’s create some group guidelines about behaviour. (eg. No
touching, no creating movements that make others flinch, movements have to be controlled, safe and regular – that show be are trying to be mindful of everyone’s comfort level.)

When everyone has joined in, ask the kids to take a look around and think about what the machine may be doing. Ask them to share with the group what the machine is called and what purpose it serves.

**ACTIVITY 2 [10 - 15 min]**

**Extra-Sensory Guessing Game**

A new planet means new life – and new technology. There may be plants or animals that we cannot even dream of. Set up a sensory table, where kids touch, smell, hear and taste (optional!) items to guess what they are. Items can also be placed in a bag or box and passed around as the children sit. Kids can be blindfolded or just keep their eyes closed and can guess the items as a group or individually.

Questions for discussion: What do you notice about the item? Is it alive, do you think? If so, is it a plant or an animal? If it is not alive, what do we use it for in our new extraterrestrial home?

Common, easy to find item suggestions:

<table>
<thead>
<tr>
<th>Natural World</th>
<th>Office Supplies</th>
<th>Craft Supplies</th>
<th>Storytime</th>
<th>Food*</th>
<th>Toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sticks</td>
<td>Paper (crumpled or wet)</td>
<td>Ribbon</td>
<td>Drums</td>
<td>Pasta</td>
<td>LEGO</td>
</tr>
<tr>
<td>Pinecones</td>
<td>Ball of Tape</td>
<td>Beads/Buttons</td>
<td>Shakkers</td>
<td>Tomatoes</td>
<td>Stuffies</td>
</tr>
<tr>
<td>Leaves</td>
<td>Paperclips</td>
<td>Glue</td>
<td>Scarves</td>
<td>Peas</td>
<td>Play dough/putty</td>
</tr>
<tr>
<td>Rocks</td>
<td>Clips</td>
<td>Pipe cleaner</td>
<td>Jelly</td>
<td>Jello</td>
<td>Silly string</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tissue paper</td>
<td>Marshmellow</td>
<td></td>
<td>Puffer Toys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water Beads</td>
<td></td>
<td></td>
<td>Figurines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pop poms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marbles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yarn</td>
<td></td>
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</tbody>
</table>

*FOOD – Please note – there is risk of allergic reaction when using food items, even if the items are not consumed. Please check with caregivers prior to using food options.

**ACTIVITY 3 [30 - 40 min]**

**Build an Extra-terrestrial Home**

Kids will use a variety of open-ended materials to create a 3D model of an intergalactic space station. Either break into groups, work all together, or do the activity independently, depending on the size and inclination of the group (groups of 3-5 work well). Try to have a variety of age ranges in the group. Decide beforehand if they will be taking their creations home or leaving them at the library.

Google Image search: “Sci-fi space station” and print off a few unique images for inspiration. Talk about how far away from earth each space station might be. (For example, it takes 150-300 days to get to Mars, to get to the closest star would be over a lifetime)

Talk with the kids about things they may need to think about when they are designing their space station:
- What will people eat, and how will food be prepared?
- What will people breathe?
- Will there be “gravity” – how will it be created?
- Will the station be on a planet, or out in space?
- How will people go to the bathroom? And where?
Let the kids be the leaders in use of the materials to build their model. It can help to have a small number of LEGO figurines or similar to demonstrate what a "model" is and to give them a sense of how “big” a person would be.

Materials:

*Any of the materials used for the Sensory Game above can be re-used*

<table>
<thead>
<tr>
<th>Recycle</th>
<th>Office Supplies</th>
<th>Craft Supplies</th>
<th>Toys</th>
<th>Kitchen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tin Cans or jar lids</td>
<td>Tape</td>
<td>Markers</td>
<td>Figurines</td>
<td>Skewers</td>
</tr>
<tr>
<td>Pop Bottles</td>
<td>Paper</td>
<td>Pencil</td>
<td>LEGO</td>
<td>Toothpicks</td>
</tr>
<tr>
<td>Cardboard</td>
<td>Elastics</td>
<td>Crayons</td>
<td>Playdough</td>
<td>Paper plates</td>
</tr>
<tr>
<td>DVD/CDs</td>
<td>Glue</td>
<td>Foam sheets</td>
<td>Marbles</td>
<td>Paper cups</td>
</tr>
<tr>
<td>Styrofoam</td>
<td>Paper clips</td>
<td>Stickers</td>
<td>Blocks</td>
<td>Parchment paper</td>
</tr>
<tr>
<td>Styrofoam beads</td>
<td>Scissors</td>
<td>Felt</td>
<td>Incomplete</td>
<td>Cupcake cups</td>
</tr>
<tr>
<td>Paper towel rolls</td>
<td>Coloured paper</td>
<td>Popsicle</td>
<td>game board pieces</td>
<td>Funnels</td>
</tr>
<tr>
<td>Boxes</td>
<td></td>
<td>Sticks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egg cartons</td>
<td></td>
<td>String / Ribbon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Old clothes</td>
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<td></td>
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</tbody>
</table>

CRAFT [10 min]

Planet Sun Catchers

Materials:
- Coffee Filters
- Markers (thick tip preferable)
- Water in a spray bottle

Kids can make an image of the perfect “Goldilocks" planet – A planet that has the elements needed to sustain life. Show them some pictures of planets from far away. Have them draw on the filters with markers, using squiggles, lines, shapes, blobs etc. When they are done, spritz the filters with water from the water bottle and leave to dry.

RESOURCES

https://www.firstpalette.com/printable/cube.html
https://donjon.bin.sh/scifi/name/#type=sx;sx=space_location
https://kidactivities.net/drama-games-and-activities/
https://feltmagnet.com/crafts/howtomakesensoryfeelyboxes
https://fun-a-day.com/space-craft-for-kids-coffee-filter-planets/#a5y_p=3595566
READ ALOUD OPTIONS

- *Are You Scared Darth Vader?* By Adam Rex
- *Interstellar Cinderella* By Deborah Underwood
- *Earth Space Moon Base* By Ben Joel Price
- *Oh No! (or, How My Science Project Destroyed the World)* by Mac Barnett
- *Oh No! Not Again! (or How I Built A Time Machine to Save History) (or at Least My History Grade)* by Mac Barnett
- *Just Right: Searching for the Goldilocks Planet* By Curtis Manley
- *The Everything Machine* By Matt Novak
- *Are We There Yet?* By Dan Santat
- *Out There* By Tom Sullivan
- *Tiny Little Rocket* By Richard Collingridge

**Book TALKS:** wrap up with a few books talks to inspire them to explore their library universe

- *Space Taxi* (series) Wendy Mass, Michael Brawer
  - Humorous chapter book series that is stuffed with humour, adventure and some impressive science facts thrown in. 7+
- *Jedi Academy* (series) by Jeffery Brown
  - It’s a star wars journal, doodles, comic and newspaper clippings set in a galaxy far far away. 6+
- *Galaxy Jack* (series) by Ray O’Ryan
  - Jack has to start a new school on another planet where there is a lot to get used to, including bugs on your pizza!
- *Robots* Melissa Stewart
  - “Introduces robots and the science behind these amazing machines, including a historic timeline of robot development, common jobs robots perform in the workplace and at home, and robots of the future.” 6+
- *Astronuts* Jon Scieszka & Steven Weinberg
  - Earth is now uninhabitable and it is down to four super-powered Animal Astronauts to find “The Goldilocks Planet.” Not too hot, not too cold, not too big, not too small. Just right to save humanity.