

3 Act Math Task Connected to Community

Bike Park Model

Goal – To plan out a model of a proposed bike pump/skateboard park for the New Denver Community

Role – Park Planners

Audience – Other Planners, members of the community, and village officials like the mayor and councillors

Situation – To be carried out as the first two parts of a 3 act task

Act I -Picture slideshow of skate/bike park in Castlegar – this will spark student interest as most, if not all, have visited and used this park at some point.

1. Show picture slideshow.
https://docs.google.com/presentation/d/1Q-X6hmGqh2RFa9X6tbmEn_B7LI5ugR1VKpHuNaCawEQ/edit?usp=sharing
2. Allow time for students to think/write down in a padlet displayed on the screen so everyone can see each other's thinking. This will help us formulate the problem/question.
 - a. What do you notice?
 - b. What do you wonder?
 - c. What do you need to figure out?
3. Read students the story about the New Denver Bike/Skate park proposal to help formulate the problem/task the students will embark on. Put ideas on padlet so students can see each other's ideas.
 - a. Have the last picture showing on the screen as I read the story about the bike part development to support formulation of problem/task and ask questions like:
 - i. How do you see yourself helping?
 - ii. What sorts of things do you want to see at the skate park?
 - iii. What came to mind when the story was read to you?
 - iv. How did the story make you feel?
4. Key Problem/Question – support students to formulate this problem/task for themselves:
 - a. Create a scale model of what you think the bike park/skate park should look like as the village is looking for their input.
 - b. What information do you need to complete the problem?
 - c. Why do you need that information?

Act II – Walking field trip down to the proposed site of the bike/skate park for the community.

1. Provide students resources when they ask for them or provide where they can find the information:
 - a. Skate park location/dimension information
 - b. Skate park design proposed by village to work with
 - c. Parts/apparatuses of bike/skate park
 - d. Other ideas/parts to include that the village has not thought of
2. Have a discussion with students around formulating the task. Ideas to support student thinking would be:
 - a. What is scale and how do we do it?
 - b. What do we need to measure?
 - c. What do we need to think about as we are using a 24-can flat to build the model in?
 - i. Will have the flats for students to look at and start listing ideas.
3. Spend time building models and trouble shooting as we go along. I find that the students I work with learn best doing trial and error.

Performance – Carried out as the third part of the 3-act task.

Act III – Sharing of models of proposed skate parks created from students to video and send to village office.

1. Have students brainstorm on a padlet suggestions that make for a good presentation:
 - a. What is needed for the presentation?
 - b. How do we act as presenters?
 - c. How do we act as an audience?
2. Spend time putting presentations together and practicing.
 - a. Teacher can have an example presentation ready to share with students.

Extensions

1. Creating and proposing a budget of the project to submit to the village officials.
2. Highlighting activities the park could host to generate revenue.