

Invention Through Children's Books

Grade level: K-2

Summary of lesson: This guide supports teachers in using children's literature as a launch point for invention, problem-solving, and creative thinking with young elementary-age students.

Example books include *Abby Invent's Unbreakable Crayons* (Arlyne Simon), *Where the Wild Things Are* (Maurice Sendak), *If I Built a Car* (Chris Van Dusen)

Time/Duration: Four, 30-45 min classes (can be repeated with each additional book as wanted)

Learning Principles:

- Learn how to identify problems that fictional characters face in books
- Understand emotional, physical and social challenges that characters face
- Brainstorm solutions for characters through discussion and drawing
- Build simple prototype solutions using recycled materials
- Be able to present solutions to the class

Subject areas/Standards:

K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3, CCSS.ELA. LITERACY.RL.K.1, CCSS.ELA-LITERACY.RL.1.3, CCSS.ELA-LITERACY.RL.2.1, CCSS.ELA.LITERACY.SL.K.1/SL.1.1/SL.2.1, CCSS.ELA-LITERACY.W.K.7/W.1.7/W.2.7

Breakdown of lessons:

Class 1: Read chosen book aloud; discuss problems that the characters encounter; make a list of the problems as a class

Class 2: Choose a problem from the class list and imagine solutions; discuss and draw possible solutions

Class 3: Choose one possible solution and build a prototype using simple materials

Class 4: Present prototypes

Materials:

- Assorted office materials such as:
 - o Paper
 - o Index cards
 - o Paper and binder clips
 - o Rubber bands
- Recycled materials such as:

- o Paper towel and toilet paper tubes
 - o Folded thin cardboard (i.e., cereal boxes)
 - o Egg cartons
 - o Plastic or cardboard milk/juice containers
 - o Straws
 - o Packing materials (i.e. peanuts)
- Assorted plastic utensils
- Duct tape and masking tape
- Scissors
- Craft supplies such as felt, markers, and crayons