What do the 6 Steps look like?

Future Scene

Example topic: household spiders
Students read a future scene based on the problem topic they have researched.

The eensy weensy spider went up the water spout
Down came the rain and washed the spider out
Out came the sun and dried up all the rain
So the eensy weensy spider went up the spout again.

Problem-Solving Steps	Creative and Critical Thinking	How Students Communicate Their Work
STEP 1 Identify Challenges	• Spider could drown • Maybe lots of spiders near the house • Spider can't get back up the slippery spout • Spider separated from family	If the water inside the spout doesn't evaporate as quickly as the outside, then it might be a long time before the spider can climb up again.
STEP 2 Select an Underlying Problem	• How might we (HMW) relocate the spider • HMW free the house from spiders • HMW find alternate routes to the roof • HMW provide a new environment for the spider	Since the Neighborhood Spider is having trouble getting to his home on the roof, how might we find alternate routes to the roof this year and beyond so that the rain won't keep washing the spider back down?
STEP 3 Identify Solutions to the Underlying Problem	• Climbs up a nearby tree • Run a string for it to climb • Duct tape on the spout so it's not slippery • Live spider trap and put it on the roof	The children who live in the house will run a thick string from the ground to the roof. Even if it gets wet, the spider will be able to hang on and climb.
STEP 4 Develop Criteria	• Works in the rain • Nearby materials • Easy for spider • Not easy to destroy	1. Which solution will (WSW) work best in the rain? 2. WSW make the best use of nearby materials? 3. WSW be least likely to be destroyed by other forces?
STEP 5 Apply Criteria to Evaluate **(High is best)**	See table below	
STEP 6 Develop an Action Plan	Include details to explain the top solution: • (Who) spider • (What) find tree near the house • (How) climb the tree and drop onto roof • (Why) does not depend on special equipment	The spider will look for a tree that hangs over the house. The spider will climb up the tree and onto the branch that hangs over. Then the spider will drop down onto the roof. This is the best solution because the tree will always be nearby, even in the rain, and it's not very likely to be destroyed so no special equipment is needed.

Solution	Criterion 1 (Rain)	Criterion 2 (Materials)	Criterion 3 (Least like)	Total
Climb tree	2	4	4	**10**
String	4	3	2	9
Duct tape	3	2	1	6
Spider trap	1	1	3	5