



Constraints, Assumptions, and Scope Warm-Up Matching Game

When students consider the scope of their projects, they need to identify the constraints and assumptions, and to establish boundaries so their projects do not become too big to conquer.

GOALS

- *Understand the difference between constraints, assumptions, and scope.*
- *Categorize constraints, assumptions, and scope.*

MATERIALS

Matching Game Sheets for each group. Each group can do one project or all of them.

SET UP

- Decide if each group will do one project or all of them.
- For each of the projects listed below, remove the words “Constraint,” “Assumption,” and “Scope” before making copies. These answers are for the teacher; students will write down their own answers for each.

DIRECTIONS

1. Explain constraints, assumptions, and scope. Give examples.
 - a. **Constraints** are things that limit what you can do in some way.
 - b. **Assumptions** are things you know to be true about the project.
 - c. **Scope** is what the project will and will not do, establishing boundaries.
2. Divide into small groups; give each group one of the Matching Game Sheets. Have them discuss and identify the items as constraints, assumptions, or scope.
3. Each group presents and shares.
 - a. Debrief with discussion questions.
 - b. Was it hard to tell the difference between constraints, assumptions, and scope?
 - c. How can identifying constraints, assumptions, and scope early on help you with your project?



MATCHING GAME SHEETS

Below are the correct matches. When distributed to students, “Constraint,” “Assumption,” and “Scope” should be cut off, and the items should be cut into single strips and then mixed up. Students will categorize each sentence and write what they think it is on the back.

GARDEN PROJECT	
Constraint:	The garden should be planted by April 5 because of the growing season.
Constraint:	We don't have money for seeds.
Constraint:	We need to use the dirt already there.
Assumption:	The garden will beautify the school grounds.
Assumption:	People will appreciate the vegetables from the garden.
Assumption:	All the vegetables will grow in the garden.
Scope:	The garden will be no larger than 10 x 13 feet.
Scope:	The garden will provide some vegetables to a nearby shelter, but they should not be dependent on the vegetable yield.
Scope:	The garden will not be big enough to provide food for our school.

PLAYGROUND PROJECT	
Constraint:	Because of safety issues, the playground needs a soft surface.
Constraint:	The budget for the playground is \$15,000.
Constraint:	The equipment must be purchased from the Playground Depot because that is where we get the discount.
Constraint:	Some equipment on the playground should be accessible to handicapped children.
Assumption:	The playground will appeal to young kids.
Assumption:	The new equipment will be fun.
Assumption:	Parents will enjoy being at the playground.
Scope:	We will have at least 4 different play areas.
Scope:	The Safety Board, not the class, will have the final say about the equipment selected.
Scope:	The playground will not cater to older kids.



MOBILE DEVICES PROJECT

Constraint:	Our recommendations have to align with the state school board mobile device policy.
Constraint:	We need to justify why students should be allowed to use mobile devices in school.
Assumption:	If we make a convincing presentation, we may be able to revise the school policy.
Assumption:	It's likely that most of the teachers do not want students to bring cellphones to school.
Scope:	The presentation must not be longer than 5 minutes.
Scope:	The presentation must be done no later than next week.
Scope:	We will have students from each grade level present so we show that this is not just about what seniors want.

HISTORY WEBSITE

Constraint:	We don't have any money for the website.
Constraint:	The project must be done in 13 weeks.
Constraint:	We need to get information from former teachers and students.
Assumption:	The website will be shared at the school celebration.
Assumption:	The website will be fun for kids.
Assumption:	Adults will enjoy the website.
Scope:	We won't include all of the local history events, unless they are directly related.
Scope:	The site will cover the school's building, from 1913 to the present.
Scope:	There will be at least 10 oral histories.