Name(s)_____ Period _____ Date _____

Activity Guide - Using the Problem Solving Process

Word Search

Overview

Working with a team find the following words in the grid. They may be horizontal, vertical, or diagonal in any direction.
DEFINE, **PREPARE**, **TRY**, **REFLECT**, **PROBLEM**, **SOLVE**, **COMPUTER**, **SCIENCE**

Objective

Find and circle all 8 words as quickly as you can!

E	S	Q	H	J	H	R	C	F	A	X	M	G	M	U	E	B	L	N	I
S	R	K	E	R	E	T	U	P	M	O	C	E	C	M	Z	T	Y	J	C
D	X	A	P	N	X	Q	L	Y	V	K	L	S	X	X	N	C	E	H	N
J	M	X	P	K	W	W	O	J	Q	B	B	O	Q	M	H	E	E	H	T
B	I	U	O	E	Y	H	K	M	O	A	N	L	F	R	D	L	P	H	A
N	J	H	T	Y	R	A	E	R	C	F	L	V	M	S	C	F	A	J	M
T	I	R	Y	Q	W	P	P	H	D	X	Q	E	Q	U	N	E	R	G	S
H	Y	R	I	M	I	X	D	Z	K	B	M	N	G	O	J	R	B	K	U
P	U	B	U	E	U	J	E	G	D	T	F	B	D	T	I	M	V	V	P
H	V	W	S	K	F	D	G	K	V	D	M	S	O	X	Y	O	R	S	F
S	C	I	E	N	C	E	W	P	Q	T	E	O	R	I	A	S	Q	M	U
H	R	G	X	Y	V	N	H	I	J	D	C	F	G	V	H	E	M	Z	M
U	O	H	H	N	A	G	X	O	Q	K	K	B	I	G	M	T	W	O	L
O	P	E	I	O	Q	G	B	A	R	V	H	P	N	N	A	Z	E	X	V
Y	I	S	W	N	R	N	U	U	W	G	H	X	H	A	E	B	O	P	N
L	X	D	J	X	R	P	V	Y	J	H	U	H	X	D	Y	F	O	I	D
F	U	D	J	X	V	U	K	F	C	V	D	Q	B	P	D	Z	I	B	D
F	B	R	D	S	I	W	P	K	F	K	V	T	R	D	R	G	Y	C	R
Y	E	T	Y	O	D	M	X	H	L	L	V	P	T	J	V	I	J	C	D
H	E	X	K	R	O	I	P	B	W	E	T	O	Y	X	I	B	W	V	O

Once You're Done

Head to the last page of the activity guide and fill in the row there for the "Word Search" in the table.

Birthday Guests

Overview

A big group of 15 guests is getting together at a restaurant for a birthday. The restaurant has 3 tables that can each seat only 5 people. Below you can find some information about the people who are attending the party.

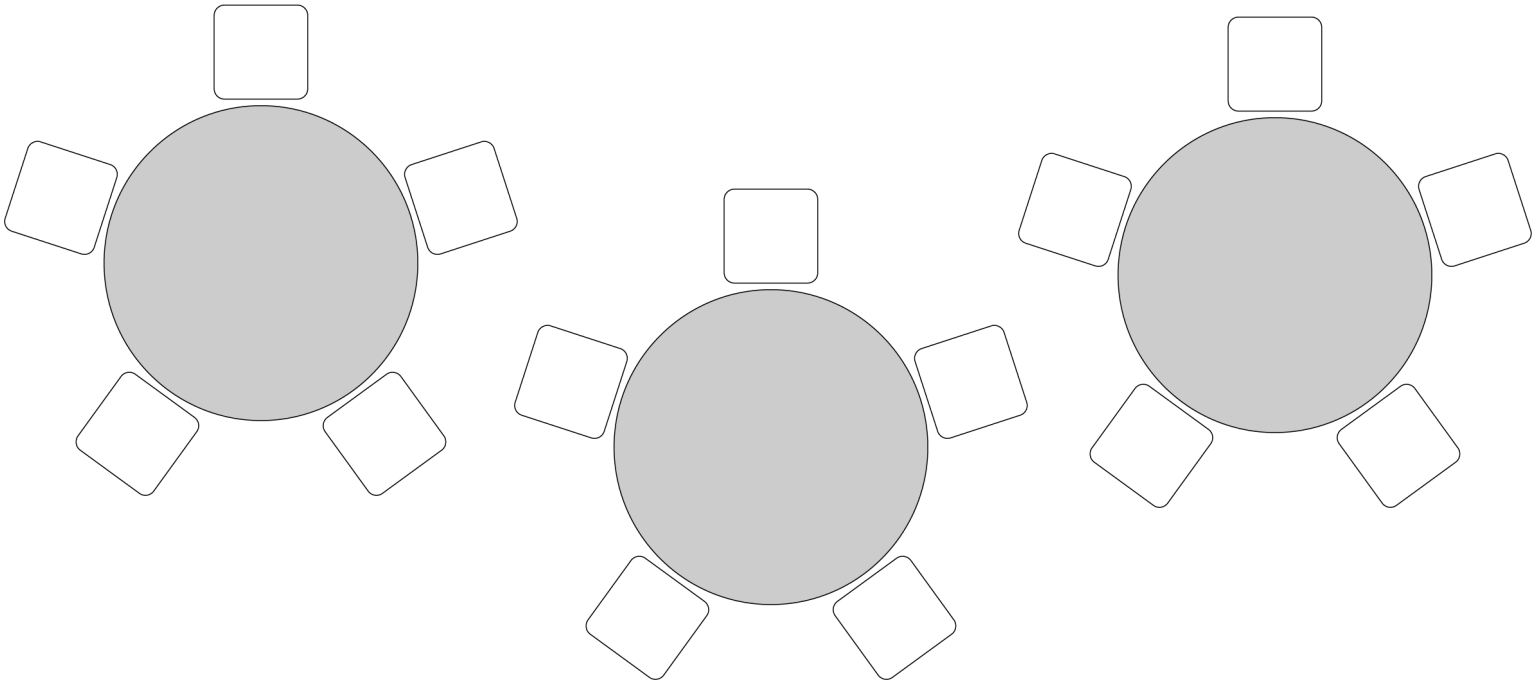
Aysha, Ben, Carla, Damien, Eric, Fan, Genaro, Hannah, Isaias, Jessica, Kyla, Laila, Max, Nazek, Owen

Close Friends (Try to put them together)	**In a Fight** (Try to keep them apart)
Aysha and Damien	Aysha and Genaro
Max and Isaias	Ben and Hannah
Nazek and Laila	Fan and Max
Owen and Genaro	Damien and Laila
Ben and Jessica	Isaias and Owen
Genaro and Eric	Kyla and Jessica

Objective

Find the best possible arrangement of guests at the party. Draw your solution in the space below. To help you can cross out the letters of the names you've assigned in the row below.

A B C D E F G H I J K L M N O



Once You're Done

Head to the last page of the activity guide and fill in the row there for the "Birthday Guests" in the table.

Plan a Trip

Overview

You and your friends will be going on a trip. You've got the entire school day to travel, and you need to get back to school by the end of the trip, but otherwise how your trip goes it up to you. Plan the best trip that you can!

Explore the Tool

Head to https://www.google.com/maps and search for your school. Look at the different options for finding directions to other locations. Don't worry about making a plan yet, but make sure you understand what kinds of information are available.

Develop Criteria

Talk with your group for a few minutes. What matters when assessing different possible trips? Do you care what you see? How you get there? How long it takes? What it costs? Write down the criteria you'll use to assess different possible plans.

Criteria	Goals	How My Plan Accounts for It
Total Time for the Trip	One school day	
Total Travel Time		
Types of Things We Want To Do		

Make a Route

Every member of your group should separately start planning your trip. You should select what places you want to go and what activities you want to do along the way. Try to make it the best possible trip based on the criteria you and your group agreed upon. For each criteria your group chose, list how your trip accounts for it in the right column. In the space below record all the stops along your trip.

Stops on My Trip

Things We'll See

Share Your Route and Get Feedback

Share the route you developed with your teammates and explain why you think it is the best possible route given the criteria you chose. Afterwards record their feedback and reactions to your route in the space below. Is there anything that needs to change? How could your route improve?

Improve and Finalize

Using the feedback from your teammates update your route. In the space below write any changes to how your new route addresses the criteria you selected.

Once You're Done

Head to the last page of the activity guide and fill in the row there for the "Road Trip" in the table.

Problem Solving Process Notes

Reflecting on Using the Process

How did you use each step of the problem solving process to solve this problem? Give examples of what each step looked like as you were solving that problem.

	Define	Prepare	Try	Reflect
Word Search				
Birthday Guests				
Plan a Trip				

The Purpose of Each Step

For each step in the problem solving process write one sentence explaining its purpose. Why is it included in the problem solving process?

Define:_____

_____

Prepare: _____

_____

Try:_____

_____

Reflect:_____

_____

Defining Problems with Questions

Before starting to solve a problem it's important that you have defined it well. What questions or strategies can you use to better define or understand a problem? Record them in the space below.