

NAME _____

Make Hybrid Connections

Earth is home to more than 390,000 plant species! They have specific traits, many of which are useful in a plant hybrid. Imagine that you are a horticulture professional traveling the world to research amazing plants and their flowers and fruits. Record the characteristics of four unique plants in the space below.

Plant name:

Region/location:

Climate and habitat:

Characteristics:

How could this plant be used in a hybrid to solve a problem or social need?

Plant name:

Region/location:

Climate and habitat:

Characteristics:

How could this plant be used in a hybrid to solve a problem or social need?

Plant name:

Region/location:

Climate and habitat:

Characteristics:

How could this plant be used in a hybrid to solve a problem or social need?

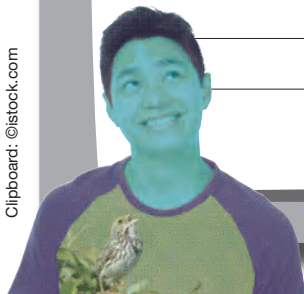
Plant name:

Region/location:

Climate and habitat:

Characteristics:

How could this plant be used in a hybrid to solve a problem or social need?





Plant Mash-Up!



INSTRUCTIONS Consider the characteristics of two existing plants and use them to create your own plant mash-up with new qualities. You can use any plant you can think of, but here are some to get you started. Make sure your final thoughts all fit on this page!



Mint

- * Underground stems help prevent soil erosion
- * Fragrant and tasty leaves contain vitamin A and antioxidants
- * Calms muscles to help treat an upset stomach and aid digestion



Olive Tree

- * Thrives in hot places; provides shelter for birds and small animals
- * Olive fruits can be cured for tasty eating
- * Consuming olive oil may reduce the risk of heart disease



Anise Hyssop

- * Adapted to dry soils so can tolerate drought
- * Attracts pollinators, especially bees, butterflies, and hummingbirds
- * Tasty leaves have a licorice-like scent and flavor



Cucumber Vine

- * Fast-growing vining plant; grows well in wet soils
- * Cucumber fruit is easy to harvest when the vine is grown on a trellis or support wire
- * A delicious source of nutrition and hydration



Sea Thrift

- * Grows well in infertile, dry, well-drained soils
- * Is adapted to life in saline (salty) conditions, such as coastal areas
- * Excellent for preventing erosion on steep, sandy slopes



Big Blue Stem Grass

- * Tall grasses provide nesting materials for birds and small animals
- * Has beautiful blue-green stems and large pink flowering heads
- * Deep roots help resist drought

Name the two plants you are combining:

1. _____ 2. _____

Name the challenge: _____

Illustrate your hybrid below:

In the space below, describe the features of your hybrid and how it will help your community.

Student Name: _____ Student Grade: _____

Teacher Name: _____ Teacher Email: _____

School Name: _____ School Address: _____

School City/State/Zip: _____



Plant Mash-Up Judging Information

rev. December 1, 2022

Instructions to students

The official entry form directs students as follows: "Consider the characteristics of two existing plants and use them to create your own plant mash-up with new qualities. You can use any plant you can think of, but here are some to get you started. Make sure your final thoughts all fit on this page!" Then they are specifically asked to submit the following:

1. Name the two plants you are combining.
2. Name the challenge.
3. Illustrate your hybrid.
4. Describe the features of your hybrid.
5. Describe how it will help your community.

The official rules for the contest pre-determined a 100-points scale separated into three areas:

1. Description (40 points): How well does the description explain the two plant sources of the hybrid, the hybrid's features, and how the hybrid will benefit others.
2. Drawing (30 points): How well does the drawing represent the hybrid? Does the drawing clearly include features from both of the original plants?
3. Creativity (30 points): How creative is the selection of the plant sources? How creative is the way the hybrid benefits the community and addresses a challenge?

We have developed our rubric to provide further segmentation within each of the three categories to provide more delineation between entries:

1. Description: Of the challenge (15 points); Listing of the parent plants (10 points); How the Plant Mash-up helps their community (15 points)
2. Drawing - Artistry (15 points); Drawing - Depiction (15 points)
3. Creativity of Thought (15 points); Creativity of How it Helps the Community (15 points)

Grade-level Appropriateness

The rubric can be used for students in 6th-12th grades. The rubric could be updated for college and university students by each professor. It is imperative you take this into consideration. Judging criteria from Poor to Superior in each of the categories is described in each box across the sheet. Thus, for example, submissions "at grade level" will generally be expected to in the "(3) Good" range. That helps set the stage that for the most part, each entry should be in the (3) range. That should be the starting base for each entry, then based on the six areas of judging, it's either poor/fair (1/2), right on target for the age group (3), or above range (4/5).

Judges Needed

You will need a set of judges to help narrow down the finalist from all the entries received. Depending on the size of your classroom or number of entries you can determine the number of finalist. This could be a good way of getting the school administration involved.

The second set of judges will only review the finalist to pick the Grand Prize and a Runner Up.

A single person of your choosing can be used to pick the Sweepstakes winner.

Score Sheets

All scores are on the 100-point scale. To compute the final score when different categories have different values, judges will perform the mathematical equation as described in score each box. For example:

- A student who is judged as “Good” in Drawing – Artistry, receives a value of (3) for Good. In the scoring box, the judge will enter “3” – this is then multiplied by 3. $3 \times 3 = 9$. Thus, the score of 9/15 is entered in the box. Indicating that the student received 9 of the possible 15 points in this category.
- After all 7 columns are scored, the total points are added and entered in the lower right as a total amount out of 100. The lowest possible score is for a student who receives (1) Poor in each category - doing the math, their final score is: $3/15 + 3/15 + 3/15 + 2/10 + 3/15 + 3/15 + 3/15 = 19/100$. Highest possible score is 100/100.

We are providing you with two versions of the score sheet – one with the formulas already populated, and the other where you can do your own calculations. Either is fine. People have different preferences.

Finalist Judging

Your judges should receive 5 -15 entries that are the finalists after the judging rubric has been applied to the entries. Each judge will use the rubric again to judge based on their own assessment of the entry. Results will be compiled. If the mathematical winners are clear (Grand Prize and a Runner Up) then no additional assessment will need to be considered.

You will have to determine who will select one entry from the non-finalist entries to be the Sweepstakes winner.

Tie-Breaking Questions

However, since all finalists will have already risen to the top, delineation of the winners may well require additional assessment from the judges. Based on the purposes of the contest, the judges will be asked to answer the following questions in preparation for the judges-wide discussion to select the winners.

Note: students were not asked to provide this information. This is our assessment of how we might best utilize the winning entries to achieve our purposes.

1. One of the purposes of the contest is to “inspire youth to learn more about plants and how they can solve community problems.” In your opinion, when you promote the winners of the contest, which are the top three entries that can be promoted to best achieve that purpose?
2. Another purpose of the contest is to “make plant information relevant to their own lives in a real-world way.” In your opinion, which are the top three entries that best articulate real-world relevancy?

Finally, after the mathematical assessment, and the assessment of the two questions above, if there are still ties, the category of Creativity will be the tie-breaking consideration. Judges will be asked to answer the following question in case this tie breaker needs to be utilized:

3. In your opinion, which one entry provides the most creativity of thought

Submitting Scores

Give your judges a deadline to email or hand you their score sheets. You should review each score card to ensure accuracy.

Social Media Highlights

Email us images of your winners to be showcased on our social media platforms and website.



Plant Mash-Up Contest!

Rubric + Judging Criteria

The rubric below describes a successful project. Plan for success by referring to it throughout your creative process as you outline, write, and edit your work. The contest judges will use these criteria to pick winners. Your teacher may also use this sheet to grade your work.

CRITERIA What does a winning entry look like?	Possible Points	Points Earned
1. Description: How well does the description explain: <ul style="list-style-type: none">the two plant sources of the hybridthe hybrid's featureshow the hybrid will benefit others (such as by addressing a specific challenge)	40	
2. Drawing: How well does the drawing represent the hybrid? Does the drawing clearly include features from both original plants?	30	
3. Creativity: How creative is the selection of the plant sources? How creative is the way the hybrid benefits the community (and addresses a challenge)?	30	
TOTAL POINTS	100	

Student's Name _____

Student's Grade _____

Plant Mash-up Contest – Scoring Rubric

	Poor (1)	Fair (2)	Good (3)	Excellent (4)	Superior (5)	Score
Drawing: <i>Artistry</i>	Drawing exhibits <u>poor</u> artistic ability for the student's grade level.	Drawing exhibits <u>below average</u> artistic ability for the student's grade level.	Drawing exhibits <u>average</u> artistic ability for the student's grade level.	Drawing exhibits a <u>high level</u> of artistic ability for the student's grade level.	Drawing exhibits a <u>very high level</u> of artistic ability for the student's grade level.	<u>× 3</u> ____ / 15
Drawing: <i>Depiction</i>	Drawing does not have any <u>identifiable</u> features of their new plant mash-up hybrid.	Drawing has <u>vaguely identifiable</u> features of their new plant mash-up hybrid.	Drawing has <u>clearly identifiable</u> features of their new plant mash-up hybrid.	Drawing has <u>clearly identifiable</u> features of both their new plant mash-up hybrid, <u>and</u> the challenge it addresses.	Drawing has <u>exceptionally identifiable</u> features of both their new plant mash-up hybrid, and the challenge it addresses.	<u>× 3</u> ____ / 15
Description: <i>The Challenge</i>	Student <u>did not</u> write the name of the challenge on the line provided. And, <u>did not</u> describe it in their written submission.	Student <u>did not</u> write the name of the challenge on the line provided. But, <u>did</u> describe it in their written submission, using <u>below average</u> words and grammar for the student's grade level.	Student <u>did</u> write the name of the challenge on the line provided. And, <u>did</u> describe it in their written submission using <u>average</u> words and grammar for the student's grade level.	Student <u>did</u> write the name of the challenge on the line provided. And, <u>did</u> describe it in their written submission using <u>above average</u> words and grammar for the student's grade level.	Student <u>did</u> write the name of the challenge on the line provided. And, <u>did</u> describe it in their written submission using <u>very high above average</u> words and grammar for the student's grade level.	<u>× 3</u> ____ / 15
Listing of: <i>Parent Plants</i>	Student did <u>not list</u> the <u>two</u> parent plants.	Student listed <u>only one</u> of the two parent plants.	Student listed <u>both</u> parent plants.	Student listed <u>both</u> parent plants. AND, student selected and listed <u>one</u> of the parent plants as a plant other than one of six examples provided.	Student listed <u>both</u> parent plants. AND, student selected and listed <u>both</u> parent plants as plants other than the six examples provided.	<u>× 2</u> ____ / 10
Description: <i>How the Plant Mash-up Helps Their Community</i>	Description explains how their new plant-mash up hybrid will help their community <u>poorly</u> , using <u>poor</u> words and grammar for the student's grade level.	Description explains how their new plant-mash up hybrid will help their community <u>fairly well</u> , but uses <u>below average</u> words and grammar for the student's grade level.	Description explains how their new plant-mash up hybrid will help their community <u>well</u> , using <u>average</u> words and grammar for the student's grade level.	Description explains how their new plant-mash up hybrid will help their community <u>very well</u> , using <u>above average</u> words and grammar for the student's grade level.	Description explains how their new plant-mash up hybrid will help their community <u>extremely well</u> , using <u>very high above average</u> words and grammar for the student's grade level.	<u>× 3</u> ____ / 15
Creativity: <i>Thought</i>	Submission provides a <u>poor</u> level of creativity for the student's grade level.	Submission provides a <u>below average</u> level of creativity for the student's grade level.	Submission provides an <u>average</u> level of creativity for the student's grade level.	Submission provides an <u>above average</u> level of creativity for the student's grade level.	Submission provides a <u>very high above average</u> level of creativity for the student's grade level.	<u>× 3</u> ____ / 15
Creativity: <i>Helping Their Community</i>	Student articulates how their plant mash-up will help the community <u>poorly</u> for the student's grade level.	Student articulates how their plant mash-up will help the community <u>fairly well</u> for the student's grade level.	Student articulates how their plant mash-up will help the community <u>well</u> for the student's grade level.	Student articulates how their plant mash-up will help the community <u>very well</u> for the student's grade level.	Student articulates how their plant mash-up will help the community <u>extremely well</u> for the student's grade level.	<u>× 3</u> ____ / 15
TOTAL						____ / 100



Plant Mash-Up Contest Finalists Scoring

Judge Name: _____

Poor (1) Fair (2) Good (3) Excellent (4) Superior (5)										
	Name	Grade	Drawing Artistry	Drawing Depiction	Description of Challenge	Listing Parent Plants	Description - Helps Community	Creativity of Thought	Creativity Helping Community	Total Score
1			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
2			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
3			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
4			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
5			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
6			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
7			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
8			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
9			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
10			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
11			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
12			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
13			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
14			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	
15			____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	____ x 2 = ____	____ x 3 = ____	____ x 3 = ____	____ x 3 = ____	

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2. Another purpose of the contest is to "make plant information relevant to their own lives in a real-world way." In your opinion, which are the top three entries that best articulate real-world relevancy?

Finally, after the mathematical assessment, and the assessment of the two questions above, if there are still ties, the category of Creativity will be the tie-breaking consideration. Judges will be asked to answer the following question in case this tie breaker needs to be utilized:

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