

Forests: A Working World in Your Backyard



Time: 20 minutes (game play can be altered to shorten time – see variation)

Materials: 1 copy of Jeopardy Master Page
 A chalkboard or whiteboard
 Chalk or white erase marker

Object: Students – to be the team with the most points at the end of the game
 Teacher – to reinforce forestry concepts in a fun way that will encourage critical thinking and inspire an effective, well-informed poster

How to Play:

1. Draw a grid on the chalkboard or white erase which shows the Jeopardy categories in relation to the different point values per question.

Fruitful Forests	Fragile Forests	Fabulous Forests	Woody Words	It's All Connected!
100	100	100	100	100
200	200	200	200	200
300	300	300	300	300
400	400	400	400	400
500	500	500	500	500

2. Separate the class into 4 or more teams. Select a team to go first. They will have one opportunity to answer that question. If they get it right, they will be rewarded that point value. If they get it wrong, they will NOT be penalized that point value. *Option:* If they get it wrong, give the other teams an opportunity to answer the question. If the challenging team gets it right, then that team will then receive the points for that question. Erase the point value for that question at the end of each team's turn.
3. Game play will continue clockwise until all the questions have been selected. The team with the greatest amount of points in the "winner."

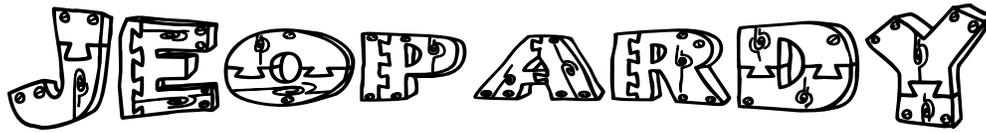
Daily Double – All 300 pt category questions have a daily double attached to them (except for "It's all Connected"). Ask the team the first part of the question, if they get it right, award them 300 pts. They then have an opportunity to gain another 300 pts by correctly answering the second part of the question.

It's All Connected (optional category) – **SRWEP highly recommends that this category be used with older or more advanced groups** (5th – 8th grade). This category challenges students to take a piece of evidence and provide an environmental explanation related to forests. We have provided suggested answers, but as this is a subjective question, each group may have a different answer. It is up to the teacher to decide if the explanation is plausible.

Variation: If you do not have time for a full game, only use the 100 – 300 pt question values for each category. **This option may also be better suited for elementary age students.**



Forests: A Working World in Your Backyard



1. Fruitful Forests: Forest Environment

- a. **100 – Look over Yonder! There goes Bambi! Name 3 forest friends she may be going to meet.**

Answer: Cottontail Rabbit, Bobolink, Woodpecker, Chipmunk, Opossum, Skunk, Coyote, etc.

- b. **200 – An ecosystem is made up of living and non-living components. Name one of each.**

Answer: Living – plants, animals, bacteria, fungus; Non-living – rocks, soil, water, air, sunlight

- c. **300 – Temperate forests provide a colorful show for New Englanders every Fall season. Name two deciduous trees common to Rhode Island and New England’s temperate forests.**

Answer: Oak, Maple, Sassafras, Ash, Cherry, etc.

Daily Double – What makes a deciduous tree deciduous? It drops its leaves.

- d. **400 – The forest ecosystem is complex from crown to root. What is the smallest type of environment within an ecosystem called and name an example.**

Answer: Microhabitat, i.e. rotting log, small patch of grass, standing dead tree, puddle, underside of a leaf

- e. **500 – Characterized by climate and dominant vegetation, these three forest biomes can be found on every continent of the globe.**

Answer: Temperate, Taiga/Boreal Forest, Tropical

2. Fragile Forests: Threats and How to Help

- a. **100 – Stewards of the land can care for forests in many ways. Name three ways you can make a difference.**

Answer: Educate Others, Plant a Tree, Diversify your own homes landscape, Enjoy forests, Use renewable products, recycle, use local firewood

- b. **200 - People tinker with the forest environment to enhance biodiversity, prevent pest infestations, and utilize the many products that forests offer. What is this practice called?**

Answer: Forestry Management



- c. 300 – These silent destructors are lurking in our forests and are replacing native vegetation right under our noses!**

Answer: Invasive Species

Daily Double - Name one invasive species. Examples: Asian longhorn beetle, Stiltgrass, Japanese Barberry, Emerald Ash Borer; Also accept wetland invasives like Phragmites and Purple Loosestrife

- d. 400 - As housing developments and new shopping centers pop-up around the state our forests become this: small disconnected patches of forest (Hint: This is the greatest threat to RI Forests).**

Answer: Fragmented/Fragmentation

- e. 500 – This type of forest threat is naturally occurring, and has made the greatest *natural* impact on RI forests affecting Chestnut, Oak, and Hemlock trees to name a few.**

Answer: Disease and Pests

3. Fabulous Forests: Benefits, Services, & Products

- a. 100 - Mmm that water sure is refreshing thanks to this part of the tree that helps to hold soil in place.**

Answer: Root System –Roots take in nutrients from the soil that in excess could be harmful to drinking water & prevent erosion

- b. 200 – Forests can be utilized for a slew of timber products, but they can also be used for non-timber products. Name 3 non-timber products.**

Answer: Clean Water, Clean Air, Medicine, Sap/Syrup/Rubber (latex), Berries, Nuts, Chocolate, Mushrooms

- c. 300 – Forests are known as Carbon Sinks and are one of the greatest assets in regulating global climate as they help to regulate these gases.**

Answer: Greenhouse Gases

Daily Double - Name another benefit of regulating greenhouse gases. Clean Air.

- d. 400 – Trees help to replenish important soil nutrients by dropping organic matter like leaves, nuts, and tree limbs that then go through this process (Everyone say hello to your favorite Earth Worm!)**

Answer: Decomposition or Decompose

- e. 500 – Rhode Island forests are home to this plant whose extract is used as a gentle astringent.**

Answer: Witch Hazel

4. Woody B. Woodland presents Woody Words - Vocabulary



- a. **100 – There are three forest biomes including Taiga, Tropical, and this forest biome which Rhode Islanders live within.**

Answer: Temperate Forest Biome

- b. **200 – When it rains, you may see this kind of excess water carrying plastic bottles down the street and into the storm drain!**

Answer: Stormwater Runoff

- c. **300 - Pine, Hemlock, Firs, and Redwood trees are all examples of this cone-bearing category of tree.**

Answer: Conifers or Coniferous

Daily Double - Name the type of biome that is defined by these kinds of trees comprising the majority of the forest trees. Taiga or Boreal Forest

- d. **400 – Clean water & air, flood control, climate regulation, and soil protection are just a few of these services that forests provide.**

Answer: Ecosystem Services

- e. **500 – Unlike natural environments like forest, these man-made materials tend to be this which does not allow water to naturally filter through the soil.**

Answer: Impervious

5. Its all connected! Interconnectedness of Ecosystems (optional)

Directions: Questions will be hypothetical situations which provide evidence that there have been local changes to the environment. The answer will be a possible explanation of environmental conditions that may have created those changes. There may be multiple explanations; let your students think of one possible explanation. You be the judge as to whether it is plausible or not.

Ex: Question 100 pts – Well I'll be! Last year my vegetable garden could barely produce one tomato, and this year my vegetable garden is growing like crazy! I guess adding material from my compost pile has really been helpful...

Suggested Explanation: Highly nutritious soil helps plants grow, Organic Matter holds a lot of water and helps the vegetables to grow; compost is a good soil amendment that helps plants to grow

- a. **100 – What are the chances? There are such an abundance of birds and frogs and chipmunks all over my backyard! Maybe it has something to do with those foresters who have been working in the woods behind my house ...**

Suggested Explanation: Forestry Management has improved biodiversity. (In place of forestry management ,answer may be Snag Creation, Selective Thinning, Brush Piles, etc.)

- b. **200 - How can this be? My drinking water well has gone dry! Maybe it has something to do with that new shopping plaza...**



Suggested Explanation: New development is affecting the local water cycle and/or replenishing of groundwater resources. (In place of new development, answer may be increased impervious surfaces in watershed, watershed degradation, less natural space, removal of local forest, etc.)

- c. 300 – Oh no! These pesky deer are eating my garden’s beautiful flowers! Maybe it has something to do with all those invasive, non-native plants taking over the woods behind my house...**

Suggested Explanation: Deer are less likely to eat invasive plant species and instead scrounge for food in your garden. (Other answers could be invasive plants are replacing native plants and reducing food sources for wildlife; deer can’t digest non-native plants; deer are losing food sources in the wild; Deer lack predators, and so are over abundant, and there is not enough food in the forest for all the deer, etc.)

- d. 400 – My word! Maple syrup has increased from \$5 a bottle to \$10 a bottle this year! Maybe it has something to do with the general trend for the years 2000 – 2010, warmer and shorter winters...**

Suggested Explanation: Climate change (or global warming) is effecting the maple syrup industry (Other answers could include climate change is impacting maple trees; maple trees are less tolerant to warmer weather than other trees; warmer winters cause trees to produce less sap for syrup; warmer winters are shortening the harvesting period for maple farms.

- e. 500 – Poppycock! I heard that Big Poppy, slugger for the Red Sox, is up-in-arms about using Maple bats this year, instead of bats made from Ash Trees. Maple bats are fragile and tend to shatter if you hit the ball too hard. Is it possible that baseball is being affected by an invasive insect? Maybe...**

Suggested Explanation: Availability of Ash Tree wood is in decline due to the Emerald Ash Borer; Ash wood has become too expensive due to complications from the Emerald Ash Borer; The Emerald Ash Borer is ruining baseball; Maple trees are not affected by the Emerald Ash Borer.

