**Invasive Species Calendar**

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**Lesson Overview**

Students create an Invasive Species Calendar with information about terrestrial and aquatic invasive species. This calendar can be used to educate family members and community residents on the threats and prevention tips for invasive species in Michigan.

**Target Grade:** Grade 6-8

**Duration:** Three 60 min class periods

**Learning Objectives**

*After this lesson, students will be able to*:

1. Describe, state the ecosystem threat and a tip for prevention of six aquatic and six terrestrial invasive species.

**List Materials & Quantities**

*Per group of 4 students:*

* Computer with internet access
* 12 blank calendar pages
* Colored pencils or crayons

*Per individual student:*

Invasive Species Calendar Project Assignment handout

**Standards Addressed**

**Science**

MS-LS2-4 Ecosystems: Interactions, Energy and Dynamics. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-LS2.A Interdependent Relationships in Ecosystems: Predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. Although the species involved in these competitive, predatory and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving, are shared.

MS-LS2-2 Ecosystems: Interactions, Energy and Dynamics. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

**English Language Arts**

**Grade 6-8**

1. Write informative/explanatory texts to examine atopic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

**Focus Question:** How can we educate others about invasive species?

**Classroom Procedures**

1. Divide class into groups of four students.
2. Explain to the students that they will be creating an Invasive Species calendar that can be used to educate the community on the threats to Michigan’s ecosystems and provide tips for preventing the introduction or spread of invasive species. Each student in the group will be responsible for completing three calendar pages.
3. Each calendar page must include the following elements:
* Common and scientific name
* Draw and color a picture of the invasive species.
* Description
* Ecosystem threat
* Tip for prevention
1. Assign each group 6 terrestrial and 6 aquatic invasive species.
2. Pass out 12 copies of blank calendar pages to each group.
3. Have student groups present their calendars to the whole class.
4. *Optional*: vote on the top 12 calendar pages and assemble into a calendar that can be reproduced and distributed to family members, school staff members, school board members, community members, and senior citizens. Distribute free copies to local businesses to display and use.

 **Assessment of Student Learning**

Use rubric to grade each calendar page.

**We would greatly appreciate your feedback using this lesson plan! Please visit** [**https://www.biaquariumstem.org/survey.html**](https://www.biaquariumstem.org/survey.html) **to complete a short survey about your experience.**

**Invasive Species Calendar Project**

**ASSIGNMENT**

Your group will create an invasive species calendar. Each month of the calendar must highlight a different invasive species and must include **ALL** of the information from the checklist provided. Each member of your group will be responsible for creating FOUR calendar pages. Begin by selecting 6 terrestrials and 6 aquatic invasive species from the list provided and divide them up in your group. Collect the information on your invasive species using any research method you choose.

Your calendar page will educate and inform the public (your classmates and community) about a specific invasive species and the threats they impose on Michigan’s ecosystems. Review the rubric paper and check to make sure you have included the required elements:

❑ Draw and color a picture of the invasive

❑ Common Name(s) and scientific name

❑ Description

❑ Ecosystem threat

❑ Tip for Prevention

**Select from the following list: 6 aquatic and 6 terrestrial invasive species**

**Aquatic Invasive Species**\*Round Goby \*Zebra Mussels \*Fish Hook Water Flea

\*Rusty Crayfish \*Quagga Mussel \*Sea Lamprey
\*Grass Carp \*Asian Carp \* Goby

\*Alewife \*Spiny Water Flea \*Northern Snake head
\*European Frogbit \*Water milfoil \*Phragmites

**Terrestrial Invasive Species**\*Asian long horn beetle \*Japaneese Beetle \*Feral Swine
\*Purple loosestrife \*Fanwort \*Norway Maple

\*Garlic mustard \*Flowering rush \*Dog Strangling Vine
\*Common buckthorn \*Reed canary grass \*Tartarian honeysuckle

**\***Autumn Olive \*Gypsy Moth \*Mute Swan

\*Emerald Ash Borer

**RUBRIC per Calendar Page** (60 points possible for each calendar page.**)**

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| --- | --- | --- | --- |
| **Excellent 15 pts** | **Good 10pts**  | **Fair 5pts** | **Unacceptable 0pts** |
| Included picture, was neat and colored Common and scientific name included | Included pictureWas not neat and/or coloredOnly Common or scientific name included, not both | Included pictureWas not neat and/or colored Name of species not included on page | Did not include pictureand/or name |
| Description included three characteristics spelled correct and written neatly. | Description included two characteristics spelled correctly written neatly | Description included one characteristics Incorrect spelling  | Did not include description  |
| Included ecosystem threat and was spelled correctly and written neatly | Included ecosystem threat but spelled incorrectly/written poorly.  | Not enough info or info is incorrect. | Ecosystem threat not included. |
| Included tip for prevention and was spelled correctly and written neatly | Included tip for prevention but spelled incorrectly/written poorly | Tip was included but not appropriate. | Tip for prevention was not included. |