AQUATIC INVASIVE SPECIES
MOST WANTED!

SKILL LEVEL
6th-8th

KEY TERMS
Threat

EDUCATION STANDARDS
SD Science:
MS-LS1-5
MS-LS2-2
MS-LS2-4
SD Social Studies:
7.SS.2
SD English Language Arts:
6-8.WHST.2
6-8.WHST.4
608.WHST.6
SD Fine Arts:
6-8.VA.Cr.1.1
SD Ed Tech:
6.ET.KC.1
7.ET.KC.1
8.ET.KC.1

TIME NEEDED
45-50 Minutes

MATERIAL LIST
» Computer for research
» GFP documents on AIS
» WANTED posters (Appendix C)
» Crayons, markers, etc. for designing poster

EXPECTED LEARNER OUTCOMES
» **OBJECTIVE 1:** Students will become familiar with a local AIS of concern
» **OBJECTIVE 2:** Students will be able to communicate their findings to their classmates either orally via a short presentation or visually through the creation of a WANTED poster

BACKGROUND
As discussed in previous lessons, aquatic invasive species (AIS) are on the rise in South Dakota. In this lesson, students will have the chance to become the expert on one species and then teach their classmates about it.

If this lesson is being done in conjunction with other lessons in this unit, very little background information is needed. However, if it is being used as a standalone lesson, please pull additional background information from Lessons 2 and 3 in the AIS curriculum.

ACTIVITY PREPARATION
Using the lists in Appendix A and B, identify the AIS that are local to your area. Either assign students to an AIS or allow them to choose. Be prepared for students to do independent research – whether that is using the GFP documents linked below or using their own searching. Print WANTED posters for students to fill in with information specific to their assigned AIS from Printables.

VOCABULARY

Threat
An activity or process that has caused, is causing or may cause the destruction, degradation and/or impairment of biodiversity and natural processes

ACTIVITY INSTRUCTIONS

Invasive Species Most Wanted Poster

Now that students have a few lessons on AIS under their belts, it's time for them to be the researchers. This lesson allows students to work independently or in small groups to become experts on a particular AIS and then share their knowledge back to the group.

1. Break students into small groups or have them work independently and either assign or let them choose their AIS to research.
2. Instruct students to prepare the WANTED poster, including answering the questions on the bottom and drawing a picture of their AIS.
3. If time allows, have each small group or individual teach the rest of the class about their AIS using their WANTED poster as a framework for their presentation.

REFLECTION

Lead a discussion on the following questions:

1. Which species presented today poses the most significant **threat** to native species and ecosystems? Why?
2. Which species is of the least concern? Why?
3. How might these AIS impact you personally?
4. What actions can you take to stop or slow their spread of the AIS that you researched?

EXTENDED LEARNING

If you prefer a longer wrap-up for this unit, it is possible to turn this lesson into a capstone project.

- Have students (or student groups) choose an Aquatic Invasive Species from the pre- created SD AIS list.
- Have students (or student groups) research their AIS species and answer the following questions:
  - » Define what their AIS is, where it originally came from, its natural predators (if applicable).
  - » The specific AIS's effect on the food web and local ecosystem (why is it so pervasive in its non-natural location).
  - » Most common way this AIS is spread and how the public can help slow the spread. (Also how was it originally spread)
  - » Describe the economic effect of this species (think through tourism, local infrastructure, etc.).
  - » What local and national agencies are doing about this specific species.
- Possible ways to have students (or student groups) present their findings:
  - » Option 1: Have students prepare a report and hand it in to their teacher.
  - » Option 2: Have students create an informational flyer, news article, PSA, etc.
  - » Option 3: Have students create a presentation (via PowerPoint or Presentation Board) to present to either their class or local agencies (e.g., GFP, FWS, among other interested parties).

SOUTHEAST SOUTH DAKOTA

Asian Clam (Invert; Lake Yankton)

Bighead Carp (Fish; Lower Big Sioux, James, and Vermillion rivers, Lake Byron/ adj Lake Mud)

Brittle Naiad (Plant; McCook Lake)

Curlyleaf Pondweed (Plant; Lake Hurley, Lake Mitchell, McCook Lake, Nelson Lake, Lake Yankton)

European Rudd (Fish; Interstate Lake)

Grass Carp (Fish; Lower Big Sioux, James, and Vermillion rivers, Lake Byron/ adj Lake Mud)

Silver Carp (Fish; Lower Big Sioux, James, and Vermillion rivers, Lake Byron/ adj Lake Mud)

Zebra Mussel (Invert; Lake Mitchell, McCook Lake, Lake Yankton)

NORTHEAST SOUTH DAKOTA

Bighead Carp (Fish; upper James River)

Curlyleaf Pondweed (Plant; Bigstone Lake, Blue Dog Lake, Lake Alice, Lake Traverse, Pickerel Lake, Roy Lake)

European Rudd (Fish; Lake Alice, Mina Lake)

Grass Carp (Fish; upper James River)

Silver Carp (Fish; upper James River)

Zebra Mussel (Invert; Blue Dog Lake, Clear Lake, Dahme Quarry, Enemy Swim Lake, Lake Cochrane, Lake Kampeska, South Rush Lake)

WESTERN SOUTH DAKOTA

Asian Clam (Invert; Angostura Reservoir)

Curlyleaf Pondweed (Plant; Angostura Reservoir, Herrick Lake, Lake Roosevelt, Rahn Lake)

European Rudd (Fish; Newell Reservoir)

BLACK HILLS SOUTH DAKOTA

Curlyleaf Pondweed (Plant; Angostura Reservoir, Canyon Lake, Rapid Creek, Sheridan Lake, Stockade Lake)

Didymo (Plant; Castle Creek below Deerfield Reservoir, Rapid Creek)

European Rudd (Fish; Horsethief Lake, Pactola Reservoir, Sheridan Lake)

Red-Rimmed Melania (Invert; Fall River)

Purple Loosestrife (Plant; Rapid Creek)

Zebra Mussel (Invert; Pactola Reservoir)

MISSOURI RIVER/CENTRAL SOUTH DAKOTA

(Oahe, Sharpe, Francis Case, Lewis and Clark reservoirs, Missouri River below Gavin's Point Dam)

Asian Clam (Invert; Francis Case, Sharpe, and Lewis and Clark reservoirs, Missouri River below Gavin's Point Dam)

Bighead Carp (Fish; Missouri River below Gavin's Point Dam)

Brittle Naiad (Plant; Lewis and Clark Reservoir)

Curlyleaf Pondweed (Plant; Dakotah Lake, Oahe, Sharpe, Francis Case, Lewis and Clark reservoirs)

Eurasian Water Milfoil (Plant; Oahe, Sharpe, Francis Case, Lewis and Clark reservoirs)

European Rudd (Fish; Oahe, Sharpe, Francis Case, Lewis and Clark reservoirs)

Flowering Rush (Plant; Lake Faulkton, Lake Louise)

Grass Carp (Fish; Missouri River below Gavin's Point Dam)

Purple Loosestrife (Plant; Sharpe, Lewis and Clark reservoirs)

Red Swamp Crawfish (Invert; Lewis and Clark Reservoir)

Rusty Crayfish (Invert; Lewis and Clark Reservoir, Missouri River below Gavin's Point Dam)

Silver Carp (Fish; Missouri River below Gavin's Point Dam)

Zebra Mussel (Invert; Francis Case, Sharpe, and Lewis and Clark reservoirs, Missouri River below Gavin's Point Dam)

FOR THE MOST UP-TO-DATE INFORMATION, VISIT
SDLEASTWANTED.SD.GOV

SOUTHEAST SOUTH DAKOTA

Asian Clam
Bighead Carp
Brittle Naiad
Curlyleaf Pondweed
European Rudd
Grass Carp
Silver Carp
Zebra Mussel

NORTHEAST SOUTH DAKOTA

Bighead Carp
Curlyleaf Pondweed
European Rudd
Grass Carp
Silver Carp
Zebra Mussel

WESTERN SOUTH DAKOTA

Asian Clam
Curlyleaf Pondweed
European Rudd

BLACK HILLS SOUTH DAKOTA

Curlyleaf Pondweed
Didymo
European Rudd
Red-Rimmed Melania
Purple Loosestrife
Zebra Musse

MISSOURI RIVER/CENTRAL SOUTH DAKOTA

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Flowering Rush
Grass Carp
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WANTED

AQUATIC INVASIVE SPECIES

NAME:_____

LOCATION OF ORIGIN:_____

LAST SEEN:_____

MODE OF SPREAD:_____

PREFERRED HABITAT:_____

IMPACTS:_____