High Ability and Enrichment Remote Learning Resources

This list is intended to serve as a starting point for districts, schools, and teachers working to continue high ability and enriched learning in the face of school closures and Continuous Learning.This list does not necessarily represent all available curriculum providers and does not indicate any particular curriculum recommendation by the Indiana Department of Education. **Please make efforts to ensure enrichment opportunities are accessible to your high ability students during times of remote learning.**

STEM

Interactive math, science, and coding.

- Khan Academy has created a daily online schedule for students of all ages with full lesson plans. Teachers are offered a free account.
- PhET of University of Colorado Boulder has thousands of interactive math and science simulations for students of all ages.
- Tynker offers free teacher accounts with free coding activities for students (limited access with free accounts).

Math Enrichment

- Ian Byrd has some incredible activities at Byrdseed.com as well as on ByrdseedTV, which has ready-to-go online, independent, and group activities.
- Dan Meyers has 3-act tasks for intermediate/middle school.
    - 3-Act Tasks are really engaging and could work to enhance any math lesson/unit. This could be something you ask your students to try to create as a way to show their understanding of a math concept
- Graham Fletcher's webinar, *Facilitating Rich Math Tasks Remotely with Graham Fletcher:* Webinar + chat box conversation, shows how to incorporate 3-Act tasks w/ eLearning.
  Additional resources from the webinar:
    - *Facilitating Rich Math Tasks Remotely* slide deck
    - *Lemonade Stand 3-Act Task* video
    - Gfletchy.com, Graham's website

Computational thinking and computer science skills are crucial for the new economy

- **Computational thinking** is "a way of solving problems, designing systems, and understanding human behavior that draws on concepts fundamental to computer science. Check out Khan Academy's interactive binary sorting activity to show how an algorithm (a process) can result in efficient deduction rather than randomized guessing.

Lessons, media, and more at NASA

- NASA has STEM lessons for all ages, a copyright free media library, and resource collections for a multitude of topics.

ENGLISH LANGUAGE ARTS/HUMANITIES

IDOE high ability units

- IDOE HA ELA Units are accessible by all and offer a wonderful source of enriching activities for all grade levels. Most resources are accessible online.

Digital media collections

- Library of Congress (LOC) Digital Collections has endless primary source documents for students to explore.
- PBS Learning Media has tens of thousands of state curriculum-aligned digital learning resources. Integrates with Google Classroom and Remind.

Literature comes alive with Kidlit TV

- Kidlit TV has videos and podcasts with authors and illustrators. The site also provides activity ideas, including the annual nationwide video contest, 90 Second Newbery Film Festival, which is open to students of all ages.

Digital libraries

- Digital Public Library of America
- Nautical Archaeology Digital Library
- Biodiversity Heritage Library
- The Getty Publications Virtual Library
- The New York Public Library's online collection
- History of Medicine Division at the National Library of Medicine
- Central Intelligence Agency's Freedom of Information Act Electronic Reading Room

Open source books and online libraries featuring works from around the world.

- Project Gutenberg Free Online Library Open the works in html and right click for Google translations of anything from Ancient Greek texts to classic Norwegian literature.
- International Children's Digital Library Explore tales, fables, and stories from around the world in over 59 languages.

Reading lists by grade

- Mensa for Kids Excellence in Reading Program is a free program open internationally to any and all readers under 18 years of age (Grades k-12), their teachers, and librarians. The program encourages students to read to the level of their ability or interest, regardless of age or grade level.

Virtual museums and operas

- Click here for a list of museums throughout the world who have opened a google virtual tour.
- Metropolitan Opera: Free Nightly Opera Stream provides free streaming of different encore presentations from the company's *Live in HD* series.

Junior Great Books

- Great Books has created an online platform with opportunities to continue shared inquiry in a remote setting with Junior Great Books Plus.

ORGANIZATIONS

Indiana Association for the Gifted

- IAG offers extensive resources for Indiana educators, families, and students. Explore all they have available here.

National Association for Gifted Children

- NAGC has compiled a list of eLearning resources for the gifted learner, family, and teacher.

ADDITIONAL RESOURCES

Alternate Methods of Instruction (AMI) Migration Maps

- Check out these AMI Migration Maps provided by the Missouri Department of Education that offer adaptations to easily modify standard instructional techniques from in person to virtual.

Advanced Learning Labs

- North Carolina Department of Public Instruction created Advanced Learning Labs designed for K-12 HA learners.

Free tutoring with Rose-Hulman

- AskRose has free math and science tutoring for middle and high school students.

Online courses and video lessons

- Crash Course, an online youtube channel started by Hoosier native John Green and his brother, Hank, has 15 courses with up to 75 video lessons for each. Lessons are geared for the middle and high school student.
- Crash Course for Kids follows the same format as Crash Course but with elementary level content.
- TedED has engaging video series for all ages. Sign in with Google to create lessons.

Thinking skills practice

- Prufrock Press At-Home Student Activities & Worksheets offers a free eBook of *Thinking Skills Activities* for Grades 3-8

Industry outreach and virtual connections

- Nepris has an incredible selection of videos from industry experts.

K-12 Online Resource List adapted from Ohio GIS

- Resource list organized by both type of activity and discipline.

Leadership/Service Program

- Lead4Change Student Leadership Program has resources for in-class or virtual learning that allow grade 6-12 HA learners to reach as far as they desire and affect change in their community. The program is FREE to educators and students across Indiana.

OFFLINE ACTIVITIES (with online options)

Not all activities require the use of the internet. Challenge high ability students of all ages to show their understanding of a concept in unique and creative ways.

Alphabet

Paper and pencil.

- Challenge students to come up with a word, phrase, alliteration, etc. for every letter of the alphabet and all must be related to a particular topic or concept.
    - ***Online***→ Have an asynchronous discussion where every post must start with the next letter in the alphabet AND must still relate to a particular topic.

- Challenge students to write an adjective followed by a noun or an adverb followed by a verb in alphabetical order. For example, arrogant bonobo, cantankerous dinosaur…or...aptly boast, creatively dance.
    - ***Online***→ Have an asynchronous or synchronous discussion where each student in sequence has to add the next pair, or have all students submit the same letter set to encourage unique answers.

Categorizing

Paper and pencil

- Challenge students to think of as many items as they can for a particular category. For example, given the category, Things That Fly, students may answer: birds, planes, pilots, time. Add a layer of depth by having students explain how they know each item fits in the category.
    - ***Online***→ Have a synchronous discussion where each student has to add a unique item without any repetition of others' responses.

Creative and Divergent Thinking

Paper and pencil

- Challenge students to provide the question to a given answer. Connect the answer to a topic of study or allow it to be random. For example, give students the answer, GOAL, students may write: What is yelled excitedly at soccer games? Or, what is a word commonly used to describe a desired outcome? Or, what is a word that rhymes with foal?
    - ***Online***→ Have an asynchronous discussion where all students will write a question all answering with the same one word.

- Challenge students to consider obscure things. Provide students with thought provoking questions they are to answer with a clear explanation of why they answered in the way they chose. For example, give students the question, If you could have any superpower, what would it be and why? Or, given the opportunity to live in a space station without

returning to land for the next two years, would you, and why? Or, what brings you the most happiness, and why?
    - **Online**→ Have an asynchronous discussion where students are encouraged to read other responses and reply with connections or questions.

Cross-Curricular--All Ages
Vocabulary--Biology--SEL

- High Ability students love making connections. Give them a platform to strengthen those neural connections through alliterative fun!

- Build student vocabulary at all ages by pairing adjectives with animals. Use the definition of the word to showcase the behavior it describes. Determine an animal that embodies the denotation or the connotation of the new word. Have students research this animal to evaluate how the meaning of the word is evident in the animal. Students can create their own pairings.

- Take each new vocabulary word and discuss how its definition is seen through the behavior of an animal. Take this opportunity to learn about the taxonomy of the animal and the basic characteristics of each allowing this to work at all ages of student.

- Take the discussion to the social emotional realm and discuss how that behavior makes a person feel when displayed by an animal. How does it feel when a human displays the behavior? Determine what that behavior looks like in a human. Discuss how a human uses the cerebral cortex to inhibit or monitor behaviors.

Examples:
Word: *plucky*
Animal pairing: *puppy*
Possible research question: *Are puppies plucky? Defend your answer with specific characteristics of puppy behavior.*
Discussion: *How would a puppy who is being plucky make you feel? If a human is being plucky, will the behavior be different from a puppy? Have you ever felt plucky; describe what that felt like? Is being plucky a positive trait?*

Word: *irascible*
Animal pairing: *iguana*
Possible research question: *Are iguanas irascible? Defend your answer with specific characteristics of iguana behavior.*
Discussion: *How would being around an irascible iguana make you feel? How does that sensation transfer when a human is being irascible? How does it feel when you are being irascible? How does it feel when your best friend is being irascible?*