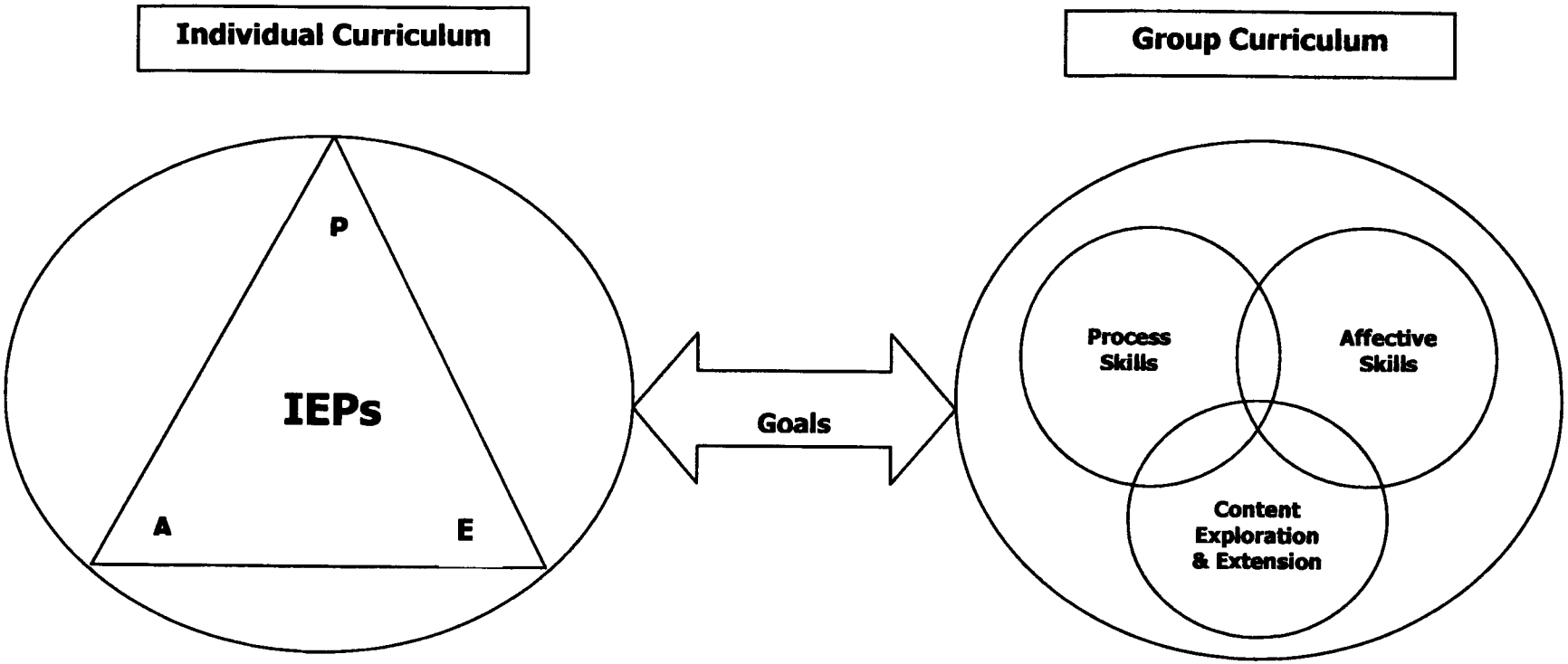
Gifted Education Curriculum



Scope and Sequence Guide:
Gifted Education: K-12
Blue Valley School District

Skill Strand:

☐ **Process Skills**
- ☐ **Research**
- ☐ **Critical/Creative Thinking**
- ☐ **Problem Solving**
- ☐ **Technology**

☐ **Affective Growth**
- ☐
- ☐
- ☐
- ☐

☐ **Extension & Exploration**
- ☐
- ☐
- ☐
- ☐

Skill Area	By the end of grade 2	By the end of grade 5	By the end of grade 8	By the end of grade 12

Scope and Sequence Guide: Research
Gifted Education: K-12
Blue Valley School District

Skill Strand:

☒ **Process Skills**
- ☒ **Research**
- ☐ **Critical/Creative Thinking**
- ☐ **Problem Solving**
- ☐ **Technology**

☐ **Affective Growth**

☐ **Extension & Exploration**

Skill Area	By the end of grade 2	By the end of grade 5	By the end of grade 8	By the end of grade 12
Inquiry-Based Research:				
Task Initiation Definition	Explores 2-3 topic possibilities which fit the needs of the project. Compose a simple research question. Identifies needed information.	Explores several possible topics to fit needs. Defined research question is present. Offers ideas for information needed.	Actively explores a variety of possible topics to fit project plan. Develops a well-defined research question. Identifies information required to answer research question.	Explores multiple topics within project parameters. Formulates clear, answerable research questions and chooses best one. Identifies multiple information resources.
Information Seeking Strategies	Determines 2-3 possible sources. Uses title, author or keyword search and uses the index, table of contents and glossary to retrieve needed information.	Determines possible sources and selects those appropriate to purposes including those beyond local resources e.g. interlibrary loan, interviews, TV, film. Differentiates primary and secondary sources.	Examines multiple sources and selects those most appropriate to purposes. Uses both primary and secondary sources.	Determines multiple sources from various primary and secondary sources using technology and other tools for information retrieval.
Source Location and Access	Locates sources with some assistance and can determine how to locate information within the source.	Locates sources with little assistance and shows skill in determining how to locate information within the source.	Locates selected sources and shows advanced skill in determining how to locate relevant information within the source including choosing the best format e.g. print, digital media, interview, survey.	Evaluates information sources and supports the selection and use of each e.g. books, reference texts, journals, political speeches, debates, newspaper and broadcast editorials, electronic databases.
Use of Information	Reviews literature with some estimate of validity and relevance. Extracts information. Summarizes collected information in own words.	Reviews literature and evaluates valid and relevant data. Extracts information without aid. Uses learned strategies for note taking, organization and categorizing information from multiple formats and sources.	Reviews literature and correctly evaluates which data is relevant and valid. Extracts information skillfully. Formulates note taking and organizational skills to fit the situation.	Reviews all information resources collected and chooses the most relevant and valid to answer the research question. Uses multi-source (written/digital) options for organizing information.
Synthesize Information	Organize information and categorize data with some assistance. Presents findings adequately to audience.	Organizes information well with some categorization of data. Presents findings in an appropriate manner to audience.	Organizes information well, categorizes data collected and presents findings in a manner that is appropriate and interesting to the audience. Demonstrates the ability to use a research methodology to combine relevant and exclude extraneous information from multiple sources.	Formulates a research plan, strategy and timeline appropriate to the discipline and supports the thesis statement, analyzes and synthesizes information from diverse resources, provides evidence, draws a conclusion and creates an original product.

Model source: http://www.big6.com/category/overview-of-the-big6-skills/, BV Science and Library Media Standards two grade levels above
Revised 6/12/08

Skill Area	**By the end of grade 2**	**By the end of grade 5**	**By the end of grade 8**	**By the end of grade 12**
Evaluation	Evaluates product effectiveness and process efficiency. Brainstorms ideas for future modifications.	Evaluates product effectiveness and process efficiency well. Generates ideas for improving future research developed.	Evaluates product effectiveness and process efficiency. Generates a plan for modifying future research to improve efforts.	Evaluates product and process using multiple criteria. Generates plans for future research which incorporate learning from past efforts.
Scientific Research:				
	Asks a question, formulates a hypothesis, identifies variables, designs an investigation, collects data, analyzes data, draws conclusions and communicates findings.	Identifies/formulates scientific questions, formulates hypotheses, designs an experiment which includes variables (independent, dependent, constant), collects data through mathematics and technology, analyzes data, draws logical conclusions and communicates findings, generates further questions and evaluates investigation for errors.	Identifies/formulates scientific questions, formulates hypotheses, designs an experiment which includes variables (independent, dependent, constant), collects data through mathematics and technology, calculates statistical data using appropriate descriptive forms (per centiles, correlations, standard deviations) analyzes data, draws logical conclusions and communicates findings via APA style paper and presentation, generates further questions and evaluates investigation for errors. Identifies other types of research: Ex post facto, historic, qualitative, etc	Identifies/formulates scientific questions, formulates hypotheses, designs an experiment which includes variables (independent, dependent, constant), collects data through mathematics and technology, calculates statistical data using appropriate descriptive forms (correlations, standard deviations, t scores, Chi Square) analyzes data, draws logical conclusions and communicates findings via APA style paper and presentation, generates further questions and evaluates investigation for errors. Identifies other types of research: Ex post facto, historic, qualitative, etc.

Model source: http://www.big6.com/category/overview-of-the-big6-skills/, BV Science and Library Media Standards two grade levels above
Revised 6/12/08

Scope and Sequence Guide: Critical Thinking
Gifted Education: K-12
Blue Valley School District

Skill Strand:

☒ **Process Skills**
- ☐ **Research**
- ☒ **Critical/Creative Thinking**
- ☐ **Problem Solving**
- ☐ **Technology**

☐ **Affective Growth**

☐ **Extension & Exploration**

Students will be able to:	By the end of grade 2	By the end of grade 5	By the end of grade 8	By the end of grade 12
Understand and apply critical thinking skills: **Deductive**	Use given information to apply to a specific situation. Solve spatial and abstract thinking problems.	Analyze information for relevance. Demonstrate spatial solutions and abstract thinking through product creation.	Analyze open-ended problems from specific to general (observations, patterns, tentative hypothesis, to theory). Determine cause and effect Use logic to support.	Design experiments using dependent and independent variables Evaluate significance of cause and effect relationships Prioritize logical constructs in a meaningful hierarchy
Understand and apply critical thinking skills: **Inductive**	Connect new learning with prior learning. Group and label information and draw conclusions.	Connect seeming unrelated data with learning. Categorize information and makes predictions based on analysis. Demonstrate reasoning using analogies.	Analyze open-ended problems from general to specific (theory, hypothesis, observations, confirmation / conclusion). Determine cause and effect Use logic to support.	Appraise the efficacy of a logical argument Examine logic for type I and type II errors Prioritize logical constructs in a meaningful hierarchy
Understand and apply critical thinking skills: **Evaluative**	Utilize given evaluative criteria to make judgments in a given situation. -Compares similarities and differences -Make observations -Distinguish fact from opinion. Generate support for a given solution or idea.	Demonstrate ability to generate evaluative criteria in a given situation. -Predict consequence of an action -Classify information into categories -Identify central issue of a situation Use generated criteria to recommend and support evaluative judgments	Demonstrate an ability to defend, judge, justify the credibility of a source, hypothesis, information, ideas Develop and apply criteria to recommend and support evaluative judgments	Make recommendations based on the findings of a logic sequence Justify solutions based on evaluative criteria and evaluative judgments

Understand and apply creative thinking skills: **Fluency**	Demonstrate fluency by creating a list of ideas from concrete suggestions.	Demonstrate fluency by creating a list of ideas from concrete and abstract suggestions.	Demonstrate an ability to brainstorm, rearrange attributes, free-associate techniques, categorize, link related ideas and solutions and suspend judgment.	Demonstrate an ability to create convergence between associations
Understand and apply creative thinking skills: **Flexibility**	Demonstrate ability to view or approach a problem in a unique way with assistance.	Demonstrate ability to view or approach a problem in a unique way independently.	Demonstrate an ability to redefine problems from a unique or novel perspective.	Demonstrate an ability to generate ideas based on theory
Understand and apply creative thinking skills: **Originality**	Demonstrate ability to recognize or create unique ideas with assistance.	Demonstrate ability to recognize or create unique ideas independently.	Demonstrate an ability to develop and apply criteria to judge the appropriateness or value of new ideas.	Demonstrate an ability to transfer multiple ideas into a larger whole
Understand and apply creative thinking skills: **Elaboration**	Demonstrate ability to elaborate given ideas with assistance.	Demonstrate ability to refine ideas through enhanced details and revisions independently.	Demonstrate an ability to evaluate and refine ideas and solutions listing strengths and weaknesses.	Demonstrate an ability to prioritize discrete constructs

Scope and Sequence Guide
Gifted Education: K-12
Blue Valley School District

Skill Strand:

☒ Process Skills
- ☐ Research
- ☐ Critical/Creative Thinking
- ☒ Problem Solving
- ☐ Technology

☐ Affective Growth

☐ Extension & Exploration

Students will be able to:	By the end of grade 2	By the end of grade 5	By the end of grade 8	By the end of grade 12
DEFINE PROBLEM	Recognizes problem with teacher questioning.	Recognizes problem and develops a range of questions to guide their research.	Recognizes problem and asks questions that promote deep and enduring understanding of topic.	Examines critically the implications of the problem and has a multi-faceted approach.
PROBLEM SOLVING STRATEGIES	Determines a range of strategies with teacher guidance.	Determines a range of strategies independently.	Selects, applies, and evaluates appropriate problem solving strategies.	Selects, applies, and evaluates appropriate problem solving strategies In addition, combines multiple problem solving strategies and can re-direct as needed.
SYNTHESIZING INFORMATION	Extracts relevant information with teacher guidance.	Extracts relevant information independently.	Extracts relevant information and sees problems from multiple perspectives.	Extracts relevant information and seeks multiple alternatives to find solutions.
DEVELOP A SOLUTION	Develops a possible solution with teacher guidance.	Develops possible solutions independently.	Sees multiple solutions and evaluates which solution is most effective.	Sees multiple solutions and understands and evaluates which solution is most effective. In addition, selects solutions that are more realistic and manageable and seeks validation from credible resources as needed. Student can explain reasoning effectively.
EVALUATING SOLUTION	Recognizes if goal was met.	Recognizes if goal was met effectively based on certain criteria.	Evaluates the effectiveness of solution and recognizes strengths and weaknesses of solution.	Evaluates effectiveness of solution once implemented. Student reflects on achievement of goal. Student can make suggestions and recommendations for future work. Student recognizes strengths and weaknesses

Model Source: Scope and sequence is an adaptation of the Big Six Problem Solving Method and the Learning Connection Problem Solving Cycle as well as Rockwood School District Problem Solving Scope and Sequence.
Revised: June 9, 2008

Scope and Sequence Guide: Technology
Gifted Education: K-12
Blue Valley School District

Skill Strand:

☒ **Process Skills**
- ☐ Research
- ☐ Critical/Creative Thinking
- ☐ Problem Solving
- ☒ Technology

☐ **Affective Growth**

☐ **Extension & Exploration**

Skill Area	By the end of grade 2	By the end of grade 5	By the end of grade 8	By the end of grade 12
Creativity & Innovation - Students use technology tools to enhance learning, increase productivity, and promote creativity	Utilizes word processing and other software to illustrate concepts and convey ideas.	Identifies and applies software features such as menus and toolbars to plan, create, and edit word processing documents, spreadsheets, and presentations	Utilizes models and simulations to explore complex issues. Creates innovative products and processes using technology.	Evaluate computer issues, products, and processes using technology.
Communication & Collaboration - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.	Utilizes a variety of developmentally appropriate media (e.g., presentation software, newsletter templates, and Web pages as resources for clip art, music, and information resources) to communicate ideas to an audience.	Identifies a variety of media and formats to create and edit products (e.g., presentations, newsletters, Web page templates, portable document format) that communicate syntheses of information and ideas to an audience.	Utilizes digital media and environments to contribute to group projects and produces authentic products.	Evaluate digital media used for group and individual projects and products.
Research & Information - **Fluency** - Students use technology to locate, evaluate, and collect information from a variety of sources.	Identifies steps for using technology resources such as CD-ROMs (reference or educational software) and Web based search engines to locate information on assigned topics, with assistance from teacher, parents, or student partners,	Describes steps for using common Web search engines and basic search functions of other technology resources to locate information, and guidelines for evaluating information from a variety of sources.	Locates, organizes, analyzes, evaluates, synthesizes, and utilizes information from a variety of digital sources.	Synthesize and evaluate quantitative and qualitative research and information, and data from a variety of digital sources.
Research & Information - **Fluency** - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.	Identifies technology resources (e.g., simple conceptual mapping software, drawing software).	Identifies, records, and organizes information on selected topics and utilizes appropriate information and communication technology tools and resources (e.g., slide show, timeline software, database, conceptual mapping).	Analyzes, selects and applies sources and digital tools based on the appropriate criteria.	Analyze and evaluate sources and digital tools based on appropriate criteria.
Critical Thinking, Problem-Solving, & Decision Making - Students use technology resources for solving problems and making informed decisions.	Selects information and communication technology tools and resources that can be used to solve problems (e.g., concept-mapping software to generate and organize ideas for a report; illustrate or sequence a story; a drawing program	Applies knowledge of problem solving tools to select appropriate technology tools and resources to solve a specific problem or make a decision.	Uses a variety of processes to explore solutions.	Analyze and evaluate the processes used to form solutions and results..

Model Source: International Society for Technology in Education – National Technology Standards

	to make a picture; presentation software to communicate and illustrate ideas; a graph program to organize and display data; a Web browser and search engine to locate needed information).			
Technology Operations & Concepts - Students are proficient in the use of technology (information management)	Recognizes functions of basic File Menu commands (new, open, close, save, save as, print) and folders to manage and maintain computer files	Identifies basic software commands used to manage and maintain computer files on a hard drive, diskette, or CD-ROM; manage and maintain their files on a network; and know how to exchange files (example: e -mail, KanEd)	Uses previous knowledge to learn new technology.	Evaluate knowledge and previous activities to determine future learning experiences.
Operations & Concepts - Students use tools to construct technology-enhanced models, prepare publications, and produce other creative works.	Collects and create pictures, images, and charts for development of word processed reports and electronic presentations	Applies procedures for importing and manipulating pictures, images, and charts in word processing documents and spreadsheets, presentations, and other creative works.	Transfers new knowledge to create original products.	Use appropriate rubrics or evaluation measures to appropriately judge and evaluate original products.

"Unit Format"

Mega Skill:
Grade Level: **Duration:**
Author(s) of this unit:

Rationale:

Measurable Objectives/Standards: (from Scope & Sequence)
By the end of this unit students will be able to:

Essential Questions:

Materials:

Hand-outs:

Instructional Strategies & Activities:

Extensions

Student Reflection/Evaluation

Assessments/Rubrics:

Resource List:

Websites:

Print Resources: