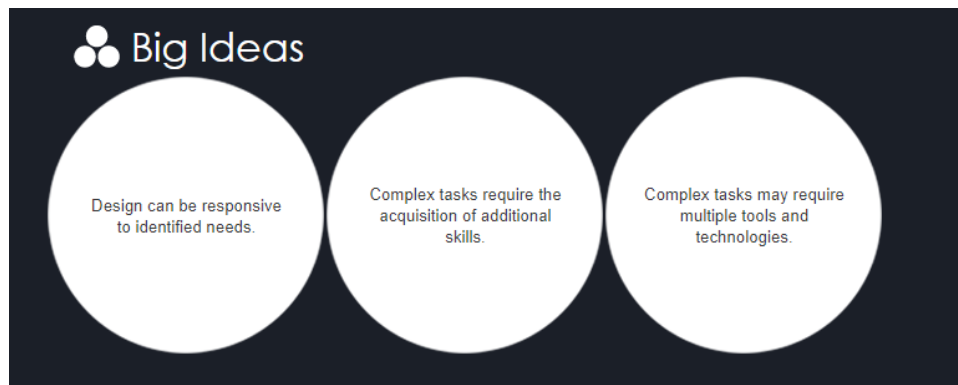# Applied Design, Skills, and Technologies 8 – Information & Technology 8 / Careers 8

Information & Technology 8 is a course that teaches students to use different computer and communication technologies to learn digital literacy and computational thinking. Using information technology tools, students will research, study and create Information Technology documents, images, and learn digital citizenship.

Course Content

Computational Thinking

- software programs as specific and sequential instructions with algorithms that can be reliably repeated by others
- debugging algorithms and programs by breaking problems down into a series of sub-problems
- binary number system (1s and 0s) to represent data

Computers and Communications Devices

- design and function of digital infrastructures, from personal communication systems to wide area networks and the Internet of Things
- social, cultural, and economic impact of mobile devices
- systems for information transfer and communication, including videos, blogs, podcasts, and social media
- keyboarding techniques

Digital Literacy

- elements of digital citizenship
- ethical and legal implications of current and future technologies
- strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow
- search techniques, how search results are selected and ranked, and criteria for evaluating search results
- strategies to engage with personal learning networks

Core Competency

Understanding context

- Empathize with potential users to find issues and uncover needs and potential design opportunities

Defining

- Choose a design opportunity

- Identify key features or potential users and their requirements

- Identify criteria for success and any constraints

Ideating

- Generate potential ideas and add to others' ideas

- Screen ideas against criteria and constraints

- Evaluate personal, social, and environmental impacts and ethical considerations

- Choose an idea to pursue

Prototyping

- Identify and use sources of information

- Develop a plan that identifies key stages and resources

- Explore and test a variety of materials for effective use

- Construct a first version of the product or a prototype, as appropriate, making changes to tools, materials, and procedures as needed

- Record iterations of prototyping

Testing

- Test the first version of the product or the prototype

- Gather peer and/or user and/or expert feedback and inspiration

- Make changes, troubleshoot, and test again

Making

- Identify and use appropriate tools, technologies, and materials for production

- Make a plan for production that includes key stages, and carry it out, making changes as needed

- Use materials in ways that minimize waste

Sharing

- Decide on how and with whom to share their product

- Demonstrate their product and describe their process, using appropriate terminology and providing reasons for their selected solution and modifications

- Evaluate their product against their criteria and explain how it contributes to the individual, family, community, and/or environment

- Reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space

- Identify new design issues

Other

-Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments

-Identify and evaluate the skills and skill levels needed, individually or as a group, in relation to a specific task, and develop them as needed

-Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task

-Identify the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make about technology use

-Identify how the land, natural resources, and culture influence the development and use of tools and technologies

Learning Materials and Assessment

All Information & Technology assignments outlines, assessments and resources are online.

Students will hand in all assignments online.

Expectations

-Respect Yourself and Others

-Always demonstrate respectful behavior

- Respect Effort and Learning

-Respect your Community and the Environment

-Attend class on time

Careers 8 helps students to understand themselves, their learning styles, skills and strengths. Through a better understanding of their interests and skills students will learn to make the best education choices when starting on their career path. Students will the relationship between education, work ethic and career goals.

Course Content

Personal Development

- goal-setting strategies
- self-assessment for career research
- reflection
- project management

Connections to Community

- local and global needs and opportunities
- cultural and social awareness
- factors affecting types of jobs in the community
- career value of volunteering

Life and Career Plan

- graduation requirements
- role of mentors, family, community, school, and personal network in decision making
- influence of technology in learning and working
- workplace safety
    - hazard evaluation and control
    - rights and responsibilities of the worker
    - emergency procedures
- role of community, school, personal network, and mentorship in career planning

Curricular Competencies

-Use self-assessment and reflection to develop awareness of their strengths, preferences, and skills

-Question self and others about how individual purposes and passions can support the needs of the local and global community when considering career choices

-Recognize the impact of personal public identity in the world of work

-Demonstrate respect, collaboration, and inclusivity in working with others to solve problems

-Recognize and explore diverse perspectives on how work contributes to our community and society

-Demonstrate safety skills and appreciate the importance of workplace safety

-Set and achieve realistic learning goals with perseverance and resilience

-Recognize the influence of curriculum choices and co-curricular activities on career paths

-Appreciate the value of a network of resources and mentors to assist with career exploration

-Question self and others about the role of family expectations and traditions, and of community needs in career choices

-Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters

-Explore volunteer and other new learning experiences that stimulate entrepreneurial and innovative thinking

-Apply decision-making strategies to a life, work, or community problem and adjust the strategies to adapt to new situations

Learning Materials and Assessment

All Careers assignments are online under the students Myblueprint account through the Myblueprint IT 8 class.

Expectations

-Respect Yourself and Others

-Always demonstrate respectful behavior

- Respect Effort and Learning

-Respect your Community and the Environment

-Attend class on time