

PROJECT ACTIVITIES AND TASKS

Activities need to be broken down into a series of tasks. Here are ideas on how major activities in your project can be organized by tasks.

PLANNING

Develop task charts, timelines, flow charts
Create a concept map
Develop a blueprint
Develop a design brief

BREAKING THE PROBLEM INTO PARTS

Develop a taxonomy
Develop a formal model
Shadow an expert

EXPANDING KNOWLEDGE

Conduct formal interviews
Hold a panel discussion or debate
Engage in Socratic dialogue
Develop / administer questionnaires
Listen to experts
Apprentice or intern
Conduct a focus group
Conduct a case study
Compose a theory
Brainstorm
Seek solutions by using analogies
Look for solutions by examining similar problems

COORDINATING

Settle a dispute between people or groups
Conduct a meeting using formal rules of order
Institute "idea bins," "in boxes," "to-do lists"
Institute "jigsaw" methods for collaborative learning
Create a database to organize information

ASSESSMENTS

Build rubrics
Conduct a cost-benefit analysis
Critique a product according to real-world standards
Use criteria to rate proposals, products, or ideas

COMMUNICATING

Defend a position
Present
Report on an event
Teach a skill to a novice
Create diagrams
Modify a presentation for other audiences

Examples on pages 88–90 are adapted from the work of John Thomas.

EXAMPLES OF PROJECT ACTIVITIES

DESCRIPTIVE RESEARCH

- Location of information
 - Observation excursions
 - Surveying experts
- Collection and organization of information
 - Observing
 - Reading and noting
 - Surveying
 - Interviewing
 - E-mail queries of experts
 - Categorization of information
 - Organized information collages
 - Factstorming (e.g., using a large board or wall to record information generated)
 - Sorting and labeling—looking for similarities and differences; looking for overarching categories
- Synthesizing information
 - Drafting paragraphs that relate information (notes on notes)
 - Drawing or graphing new ideas
 - Sequencing information
 - Drafting introductions and conclusions
 - Organizing the parts into a cohesive report
 - Collection, organization, and evaluation of information
 - Interpreting written works
 - Evaluating the work of others

HYPOTHESIS TESTING

- Data collection
- Generating hypotheses
- Experimentation—controlling variables
- Experimentation—product test
- Experimentation—comparison of products or processes

ANALYSIS

- Analyzing perspectives—panel discussions, seminars, debates
- Error analysis
- Operational analysis
 - Finding out how something works
 - Increasing the efficiency of a process
- Structural analysis
 - Investigating how a structure works
- Semantic feature analysis
 - Mapping, e.g., words, concepts, central ideas
- Cost-benefit analysis
- Comparing / Classifying

DESIGN

- Spatial problem solving
- Mapping
- Building a model
- Building a simulation
- Designing a product to meet specifications
- Designing a process to meet specifications
- Product improvement
- Process improvement

COMPOSITION

- Notetaking / Notemaking
- Synthesizing categorized information into a new scheme
- Composing outlines
- Drafting cohesive paragraphs based on syntheses of information
- Sequencing paragraphs and ideas
- Drafting introductions and conclusions

DIAGNOSES

- Solving mysteries
- Finding causes, e.g., medical detection or clinical diagnoses

CONDUCTING PROBLEM-SOLVING EPISODES

- Interpreting clues
- Identifying problems
- Defining problems
- Seeking solutions
- Generating ideas
- Trying out solutions
- Evaluating solutions

DECISION MAKING

- Applying decision-making strategies
- Generating decision criteria
- Resolving disputes, negotiating, compromising
- Testing solution ideas
- Solving moral dilemmas, relational problems

MODEL-BUILDING RESEARCH

- Reconstruction of events—role-playing, reenactment
- Explanation building, theory building
- Pattern building, e.g., through observation
- Meaning making, e.g., clinical, legal, literary, historical case studies

SCAFFOLDING IDEAS

Ways to Provide Scaffolding

DIRECT INSTRUCTION

Lectures, presentations
Films with discussions
Training sessions
Reading assignments with follow-up

HANDOUTS AND FORMS

Checklists
Templates
Timelines
Rubrics
Charts
Skeletons
Outlines
Models

ORIENTATIONS

Cues, labels, signs
List of steps, rules, roles
Written examples, samples
Oral instructions
Advance organizers
Rules of order
Graphic organizers

GUIDED PRACTICE

Rehearsals
Pilot tests
Apprenticeships
Tutorials
Training sessions
Imaging
Modeling

FEEDBACK EVENTS

Apprenticeships
Tutorials
Reflection opportunities
Peer review
Simulated tryouts
Debriefings

SELF-MANAGEMENT TRAINING

Self-monitoring, reflection
Planning
Goal setting
Self-direction, self-cueing
Self-reinforcement
Self-assessment

Scaffolding to Build Skills

GROUP PROCESS

Rules of order
Role descriptions
Guidance in listening skills
Decision-making steps
Problem-solving framework

TECHNOLOGY

Tutorial audio and video tapes
"How-to" books
Overheads

TIME MANAGEMENT

Contracting
Estimating and recording time allocations
Wall "progress" charts
Wall calendar
"Time In" and "Time Out" books

PROBLEM SOLVING

Idea generation techniques (e.g., rules of brainstorming)
Pre-printed forms with steps and hints

DECISION MAKING

Training in the use of decision-making models
Checklists

RESEARCH

Training in specific research techniques
Pre-printed data forms with strategies and questions indicated

COMMUNICATION SKILLS

Films on how to conduct a telephone survey
Role-playing exercises
Telephone scripts

TECHNICAL WRITING

Skeleton forms to guide descriptive writing
Cue cards
Half-finished examples

PERSUASIVE WRITING

Advance organizers
Outlines
Cue cards
Say it, then write it

COMPLEX OPERATIONS

Reciprocal teaching (taking turns playing the roles of teacher and giving guidance and feedback)

SELF-EVALUATION

Models of other students' evaluation forms
Checklists

METACOGNITION

Coached apprenticeship
Testifying in group settings
Telling without showing