

School Water Audit

Teacher's Guide



Background

- The HKSAR government is implementing the Total Water Management (TWM) strategy for Hong Kong.
- The TWM strategy puts emphasis on containing growth of water demand through conservation and will also strengthen water supply management.
- The enhancement of public education on water conservation is one of the key initiatives to contain the growth of water demand.
- Water Supplies Department (WSD) launches School Water Audit(SWA) to educate the young pupils about water conservation and to encourage them to relay the message and practice to their peers and family.

Objectives

- Educate primary pupils the knowledge and method of water conservation
- Develop appropriate water conservation practices in primary schools
- Encourage primary pupils to practice and promote water saving



Benefits

- Pupils
 - Learn water conservation concepts & teamwork
- Teachers
 - Combine SWA with current teaching programme(s), such as General Studies, project learning, environmental activities, etc.
- Schools
 - Achieve lower water consumption and water fee
 - Contribute to environmental protection and work together to be a green campus

Target Participants

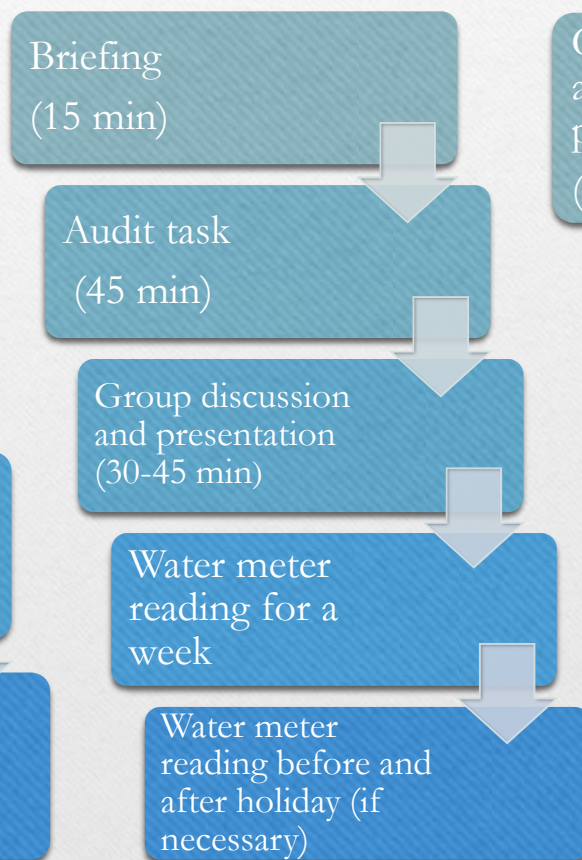
- Primary schools and pupils, preferably **primary 4 or above** pupils
- Reasons
 - Recommend for primary 4 or above pupils, who should have some knowledge on the measurement of volume
 - Supplement General Studies for primary pupils regarding water resources
 - Not recommend for primary 3 or below pupils for safety reason

Activity Flow Chart

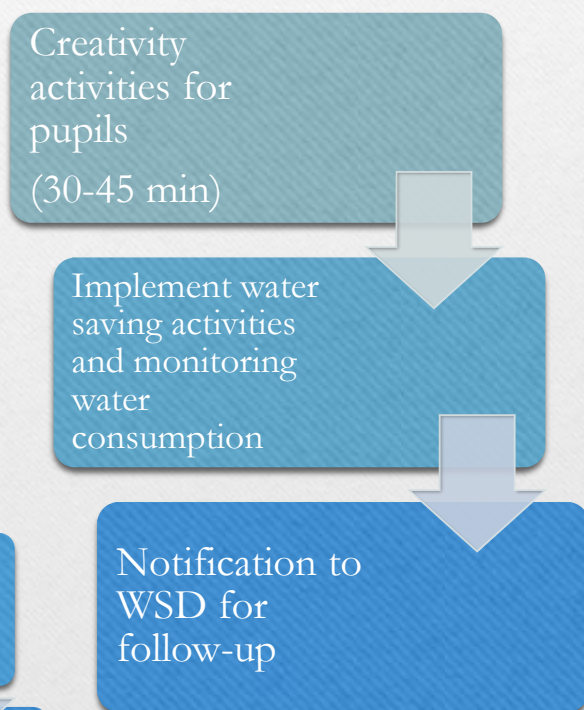
Pre-audit preparation



Audit



Follow-ups



Pre-audit Preparation



Step 1 – Meeting of school management

- Programme
 - 6 weeks ahead of the audit
- Responsible Party
 - School principal or supervisor
- Participants
 - Teachers and relevant working staff
- Actions
 - Discuss communication details and requirements of the SWA (assistance by the WSD staff if required)
 - Nominate a person as the Audit Leader to oversee the SWA
 - Decide on the date and time of the SWA

Step 2 – Preparation for the audit

- Programme
 - 3 weeks ahead of the audit
- Responsible Party
 - Audit Leader (who may contact WSD for any enquiry)
- Participants
 - Team Supervisors (teachers / school helpers)
- Actions
 - Decide on the details for the audit
 - Audit locations
 - Manpower
 - Equipment
 - Audit routes



Step 2 – Preparation for the audit

Audit locations

- Identify the location of all water using devices in the school
- Plan the locations where the pupils will carry out the audit (suggest to cover all water using areas in school)
- Examples
 - Boys' washrooms
 - Girls' washrooms
 - Staff washrooms
 - Boys' changing rooms
 - Girls' changing rooms
 - Classrooms, tuck shop, special rooms, drinking fountains, swimming pools (if applicable)
 - Outdoor taps
 - Planting areas

Step 2 – Preparation for the audit

Manpower

- Audit Team
 - Around 10 groups of pupils (4 to 5 pupils in one team)
 - Assign Leader, Observers and Recorder in the teams
- Team supervisor
 - 1 for each group of pupil (may involve teaching assistants or volunteering parents)
- School worker
 - 1 for the whole audit task
 - As an interviewee for pupils to investigate water usage in school
 - Help students to conduct audit about water used for cleaning, irrigation, aquarium, etc (Worksheet No. 8)

Note: For duties of Audit Leader; Team Supervisor; Leader, Observer and Recorder in Audit Teams, refer to “**Suggested Duty List**”.

Step 2 – Preparation for the audit Equipment

- Prepare necessary equipment
- Examples
 - Measuring jar (2 L): 1 for each group
 - Large bucket: 1 for each group or 1 at each location
 - Stop watch / ordinary watch: 1 for each group
 - Measuring tape: 1 for each group
 - Clipboard / folder with pen: 1 for each group
 - Disposable gloves and masks: when necessary



Step 2 – Preparation for the audit

Audit routes

- Assign different routes to different Audit Teams so each location is occupied by one team at a time
- Print out the worksheets for each team in accordance with their audit routes
- Examples

Group 1



Group 2



Step 3 – Seminar

- Programme
 - 1 to 2 weeks ahead of the audit
- Duration
 - 30 min
- Responsible Party
 - Audit Leader
- Participants
 - Audit Teams
- Actions
 - Teach pupils some basic concepts about water resources and water conservation
 - Show the powerpoint “**Treasure Every Drop**” to pupils
 - Examine what the pupils have learnt using “**Q&A**”



Step 4 – Demonstration video

- Programme
 - 1 to 2 weeks ahead of the audit
- Duration
 - 15 min
- Responsible Party
 - Audit Leader
- Participants
 - Audit Teams
- Actions
 - Show the demonstration video “**School Water Audit**” to pupils

Audit



Step 1 – Briefing

- Programme
 - On the audit day
- Duration
 - 15 min
- Responsible Party
 - Audit Leader / Team Supervisor
- Participants
 - Audit Teams
- Actions
 - Brief pupils their duties (refer to “Suggested Duty List”)
 - Remind pupils the “Safety and Hygiene Guidelines”
 - Distribute equipments and worksheets to Team Leaders

Step 2 – Audit task

- Programme
 - On the audit day
- Duration
 - 45 min
- Responsible Party
 - Audit Leader / Team Supervisor
- Participants
 - Audit Teams
- Actions
 - Collect water consumption information in all water using points in schools within the time frame
 - Fill in the corresponding worksheets nos. 1 to 8

Step 3 – Group discussion and presentation

- Programme
 - On the audit day
- Duration
 - 30-45 min
- Responsible Party
 - Audit Leader / Team Supervisor
- Participants
 - Audit Teams
- Actions
 - Discuss among team members their findings during the audit
 - Identify areas where water conservation is possible
 - Propose suitable measures to improve efficiency in school (complete worksheet no. 12)
 - Present their ideas in front of all teams

Step 4 – Water meter reading for a week

- Programme
 - In the week of the audit day
- Responsible Party
 - Audit Leader / Team Supervisor
- Participants
 - Designated Audit Teams / teachers / staff
- Actions
 - Record the water meter readings before and after normal school days for a week
 - Fill in worksheet nos. 9 to 11



Note: Please refer to “**Meter Reading Guidelines**” for details about reading a water meter.

Step 5 – Water meter reading before and after holiday (if necessary)

- Programme
 - The next long holiday after the audit day
- Responsible Party
 - Audit Leader / Team Supervisor
- Participants
 - Designated Audit Teams / teachers / staff
- Actions
 - Record the water meter readings before and after long holiday
 - Fill in worksheet nos. 9 to 11

Note: Please refer to “**Meter Reading Guidelines**” for details about reading a water meter.

Follow-ups



Step 1 – Creativity activities for pupils

- Programme
 - On the audit day or after the event day
- Duration
 - 30-45 min
- Responsible Party
 - Audit Leader / Team Supervisor
- Participants
 - Audit Teams
- Actions
 - Promote water conservation in schools by completing
 - “Comic Design”

Step 2 – Implementation of water saving activities and monitoring water consumption

- Programme
 - 1 week after the audit
- Responsible Party
 - Audit Leader / Team Supervisor
- Actions
 - Reduce school water consumption by
 - developing and carrying out a water-efficiency action plan (complete worksheet no. 13)
 - Monitor school water consumption by
 - checking water bills / meter readings regularly

Step 3 – Notification to WSD

- Programme
 - 1 week after the audit
- Responsible Party
 - Audit Leader / Team Supervisor
- Actions
 - Inform WSD that your school has completed the SWA by sending the followings to waterconservation@wsd.gov.hk titled “School Water Audit”
 - the completed worksheet nos. 9-13 with your school name marked on it
 - five photos taken on the audit day
 - Reduce water consumption in school by
 - assisting in the investigation of high or unusual water consumption if deemed necessary by WSD



END

